

**SOUTH COAST AIR QUALITY MANAGEMENT
DISTRICT RULE 1150.1**

**FIRST QUARTER 2005 MONITORING REPORT
BRADLEY LANDFILL AND RECYCLING CENTER
SUN VALLEY, CALIFORNIA**

Prepared for

Waste Management of California, Inc.

Bradley Landfill and Recycling Center

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Abbreviations

| | |
|---------|---------------------------------------------|
| CARB | California Air Resources Board |
| FID | Flame Ionization Detector |
| GEM-500 | CES-LANDTEC Gas Extraction Monitor |
| LFG | Landfill Gas |
| OVA | Organic Vapor Analyzer |
| PPB | Parts per Billion |
| PPM | Parts per Million |
| SCAQMD | South Coast Air Quality Management District |
| TGNMO | Total Gaseous Non-methane Organic Compounds |
| TOC | Total Organic Compounds |

1 EXECUTIVE SUMMARY

This first quarter report for the year 2005 summarizes the monitoring and sampling results at the Bradley Landfill and Recycling Center (BLRC) for compliance with South Coast Air Quality Management District (SCAQMD) Rule 1150.1(f)(2)(B) and pursuant to the conditions set forth in the Alternative Rule 1150.1 Compliance Plan (SCAQMD A/N 394147) approved by SCAQMD on June 19, 2002. The Compliance Plan is found in Appendix A.

1.1 Site Description and Background

The Bradley Landfill and Recycling Center (BLRC) is located in the Sun Valley District of Los Angeles, California, in the northwest portion of the Los Angeles metropolitan area. The landfill is owned and operated by Waste Management Recycling and Disposal Services of California, Inc. (WMRDSC, formerly Valley Reclamation Company). The site was previously utilized as a sand and gravel pit by Conrock Company. Waste Management of Los Angeles Hauling Company also operates on the BLRC property. The landfill is a Class III waste disposal facility occupying approximately 209 acres. A site map containing the current landfill boundary and locations of landfill gas (LFG) extraction wells is presented as Figure 1.

An active LFG migration/emissions control system has been in operation at the site since 1982. During normal operation, the higher BTU value LFG is processed through the gas treatment plant and delivered to one (1) on-site and one (1) offsite LFG-to-energy facility. Stewart and Stevenson (S&S) currently operates the on-site facility under contract by Waste Management, Inc. The off-site facility is owned by Penrose Landfill Gas Conversion, LLC. The on-site facility operated by S&S was placed into service on March 3, 2003. The lower BTU value gas (under 500 BTU/cf) collected from the Bradley east and the Bradley west perimeter is disposed of through the BLRC flare stations. When the higher BTU value LFG is not in demand by either of the LFG-to-energy facilities, the gas is routed to one of the on-site flare stations where it is combusted in accordance with SCAQMD rules and permit conditions.

1.2 Gas Collection and Control System

The BLRC LFG collection and control system (GCCS) consists of three (3) LFG flares, one LFG compressor, vertical extraction wells, header and subheader piping, and a condensate injection system. The LFG collection series consist of header collection pipes, laterals, vertical extraction wells and horizontal collectors. Presently, the system has 115 vertical dual completion wells and 107 single completion vertical wells for a total of 222 wells. In addition, the system has 7 horizontal collectors.

Condensate currently drains by gravity to 18 collection sumps where it is pumped to the LFG treatment plant for processing. Condensate processing consists of hydrocarbon separation, condensate injection into the flares, and pH adjustment for discharge to the City of Los Angeles sanitary sewer system. As the hydrocarbon phase is accumulated, it is transferred to the larger hydrocarbon storage tank where it accumulates until transported off-site in accordance with all applicable regulations.

1.3 Monitoring and Sampling Activities Summary

Field activities performed by EMCON/OWT Solid Waste Services (EMCON/OWT) during this quarter included:

- Monthly subsurface perimeter probe monitoring (as required by the Local Enforcement Agency)
- Quarterly integrated surface emission monitoring and sampling for laboratory analysis
- Quarterly instantaneous surface emission monitoring
- Quarterly flare inlet LFG sampling for laboratory analysis
- Quarterly ambient air monitoring (24-hour)
- SCAQMD Rule 431.1 Sulfur Monitoring

AtmAA, Inc. performed the laboratory analysis for four (4) integrated surface emission samples, flare inlet LFG samples, ambient air sample(s), and monthly perimeter probe sample from the probe with the highest field-obtained TOC as methane concentration. The integrated surface samples were analyzed for toxic air contaminants (Toxic Air Contaminants--Core Group, Guidelines for Implementation of Rule 1150.1, Table 1), methane, and total gaseous non-methane organic compounds (TGNMOs) as stipulated by SCAQMD's Rule 1150.1. The flare inlet LFG samples were analyzed for the concentration of fixed gases, hydrogen sulfide, and toxic air contaminants. The ambient

air samples were analyzed for toxic air contaminants, methane, and total gaseous non-methane organic compounds (TGNMOs). Toxic air contaminants were analyzed by gas chromatograph/mass spectrometry consistent with Environmental Protection Agency (EPA) Method TO-15. Fixed gases were analyzed by gas chromatograph/thermal conductivity detector using EPA Method 3C Modified. Total gaseous non-methane organics (TGNMOs) were analyzed using modified EPA Method 25C with gas chromatograph/flame ionization detection/total combustion analysis. A gas chromatograph/sulfur chemiluminescence detector was used to analyze for hydrogen sulfide per SCAQMD Rule 431.1 and the Rule 431.1 Alternative Monitoring Plan (A/N 267044), and analyzed using SCAQMD Method 307-91.

1.3.1 Subsurface Perimeter Probe Monitoring §1150.1(e)(1)

Monthly subsurface perimeter probe monitoring was performed using a Landtec GEM-2000 LFG monitor during the quarter. Perimeter probes were monitored for percent methane by volume in air.

Alternative monitoring procedures are used in the area of perimeter probe E-8D, including monitoring of the probe and performing surface emission monitoring of Grid 31-D, as specified in the Rule 1150.1 Compliance Plan for Bradley Landfill. These alternative monitoring procedures are implemented when TOC as methane concentrations meet or exceed five (5) percent by volume, measured as methane. Field and laboratory data from subsurface perimeter probe monitoring and laboratory TOC concentrations as methane are discussed in Section 2.2 and presented in Appendix B. Samples from the probes with the highest field-obtained TOC as methane concentrations are sent to AtmAA Inc. for laboratory analysis.

1.3.2 Integrated Surface Emission Monitoring §1150.1(e)(2)

The TOC as methane concentration collected from each grid is listed in Table 3-1, Integrated Surface Sampling Field Summary. Field data sheets are presented in Appendix C. All of the integrated TOC as methane readings were within compliance limits, as set forth by SCAQMD Rule 1150.1. Typically, the two samples having the highest field TOC as methane concentrations are sent to the laboratory for further analysis. The TOC as methane background reading was 5.0 ppm. During surface emissions monitoring, TOC as methane concentrations above background were no more than 1 ppm. Samples from Grids 20 and 40 were selected for laboratory analysis.

RES Environmental obtained samples from Grids 20 and 40 and submitted them for laboratory analysis for methane, TGNMOs, and Toxic Air Contaminants.

Laboratory analysis of the samples collected from Grid 20 detected low-level concentrations (less than 5 parts per billion [ppb]) of the following constituents: benzene, dichloromethane, carbon tetrachloride, toluene, and xylenes. Laboratory analysis of the samples collected from Grid 20 detected concentrations of methane at 5.95 parts per million [ppm]. Laboratory analysis of the samples collected from Grid 20 detected low-level concentrations (less than 5 ppm) of TGNMO.

Laboratory analysis of the samples collected from Grid 40 detected low-level concentrations (less than 5 ppb) of the following constituents: benzene, dichloromethane, carbon tetrachloride, toluene, and xylenes. Laboratory analysis of the samples collected from Grid 40 detected concentrations of methane at 7.06 ppm. Laboratory analysis of the samples collected from Grid 40 detected low-level concentrations of TGNMO (less 5 ppm) of methane. The laboratory reports are presented in Appendix C.

1.3.3 Instantaneous Surface Emission Monitoring §1150.1(e)(3)

Instantaneous surface emission monitoring was conducted on January 19, February 23, and March 22, 2005, and consisted of monitoring the landfill surface for the presence of LFG emissions. Total organic compound (TOC) measurements (measured in ppm as methane) were recorded in accordance with procedures described in the SCAQMD Guidelines for Implementation of Rule 1150.1. Areas of the landfill where TOC as methane concentrations were greater than 500 ppm TOC as methane were remonitored within 10 calendar days of the original detection. Instantaneous surface emission monitoring field data are presented in Appendix D.

In accordance with Rule 1150.1(e)(2)(C), WMRDSC determined that new wells were needed to address surface emission exceedences that occurred during the Fourth Quarter 2004 instantaneous monitoring. Construction of the wells were completed during the first quarter of 2005 between March 19 and 31, 2005. Wells 46DR, EW81DR, 90DR, 202DR/SR, and 208DR were installed.

In January 2005, instantaneous monitoring of Grids 111, 112, 113, 127, and 131 had detected concentrations of 5,000, 100,000, 5,000, 1,000, and 500 ppm TOC as methane, respectively. These grids were repaired on January 19, 2005 and 10-day remonitoring occurred on January 27, 2005. Grids 111, 112, 113, 127, and 131 were all remonitored and had concentrations less than 500 ppm. The remonitoring concentrations were 200, 5, 5, 5, and 5 ppm TOC as methane, respectively.

In February 2005, instantaneous monitoring of Grids 4, 5, 20, 93, and 106 had detected concentrations of 100,000, 1,000, 1,000, 5,000, and 1,000 ppm TOC as methane, respectively. These grids were repaired on February 23, 2005 and 10-day remonitoring occurred on March 2, 2005. All remonitoring concentrations for Grids 4, 5, 20, 93, and

106 had concentrations less than 500 ppm. The remonitored concentrations for each of these grids all measured 5 ppm.

In March 2005, instantaneous monitoring of Grids 48, 58, 59, 61, 64, 85, 96, 99, 108, 110, 112, 113, 116, 117, 118, 126, 131, and 132 detected concentrations of ranging from 1,000 to 100,000 ppm TOC as methane. Each of these grids were repaired on March 29, 2005 and 10-day remonitoring occurred on March 30 and 31, 2005. All remonitored grids had concentrations less than 500 ppm. The remonitored concentrations for each of these grids all measured 5 ppm.

Additional discussion pertaining to the grids is discussed in Section 4.2.

1.3.4 Landfill Gas Chemical Analysis §1150.1(e)(4)

LFG samples were collected from each of the three LFG flaring systems on February 17, 2005 and were analyzed for fixed gases, TGNMOs, toxic air contaminants, and hydrogen sulfide. Results are discussed in Section 5.2 and provided in Appendix E.

A new Landfill Gas Treating System Permit to Operate No. F71948 (A/N 435883) was issued in December 2004 which removed a condition that required daily hydrogen sulfide monitoring of the gas compressor.

1.3.5 Ambient Air Monitoring (24-hour) §1150.1(e)(5)

Four ambient air samplers were used to collect upwind (south) and downwind (north) samples on February 26 and 27, 2005. Two ambient air samplers were positioned upwind at the landfill property boundary and two downwind at the landfill property boundary (Figure 1). Low concentrations of benzene, carbon tetrachloride, toluene, xylenes, methane, and TGNMOs were detected in all four air samples, and a low concentration of dichloromethane was detected in in three of the four air samples (AA-1, AA-2 and AA-4). The results are discussed in Section 6.2, and field and laboratory data from ambient air monitoring are included in Appendix F.

1.3.6 SCAQMD Rule 431.1 Sulfur Monitoring

Monitoring for total reduced sulfur compounds (TRS) was conducted in accordance with the tiered methodology described in the Alternative Monitoring Plan for SCAQMD Rule 431.1, Bradley Landfill, dated April 1, 2003 (A/N 267044). The table below presents the tiered approach, which includes monitoring with colorimetric tubes and the collection of a ten-liter bag sample in a Tedlar bag from each LFG flare and gas plant inlet location. The Bradley Landfill is currently designated with a Tier I Action level.

| Action Level | AQMD Modified Tiers | Sampling Requirement |
|--------------|------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Tier I | TS < 100 ppm | -Quarterly using Method 307-91 -Monthly using TUBE |
| Tier II | 100 ppm ≤ TS < 120 ppm | -Monthly using Method 307-91 -Weekly using TUBE |
| Tier III | 120 ppm < TS < 130 ppm | -Weekly using Method 307-91 -Daily using TUBE |
| Tier IV | TS > 130 ppm | -Potential Rule 431.1 Violation -Inform AQMD immediately following R430 Breakdown Provisions -Daily using Method 307-91 |

A new Landfill Gas Treating System Permit to Operate No. F71948 (A/N 435883) was issued in December 2004 which removed the condition requiring daily monitoring of the gas compressor.

Collected samples are analyzed within 24 hours in accordance with SCAQMD Method 307-91. A detailed discussion of the sulfur content is discussed in Section 5.2.

Monthly H₂S sampling was conducted on January 21, February 17, and March 18, 2005. Samples were collected in 10-liter tedlar bags and were sent to AtmAA, Inc. for testing as required by Rule 431.1. Analytical results are presented in Appendix E and are summarized below.

| Table 1-1 Sulfur Monitoring Results | | | | |
|------------------------------------------------------|-----------------------------------------------|--------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------|
| Date | Daily Maximum Compressor (Gas Sales) | Flare 1 H ₂ S concentration (ppmv) | Flare 2 H ₂ S concentration (ppmv) | Flare 3 H ₂ S concentration (ppmv) |
| 1/21/05 | Shutdown | 38.8 | 31.8 | 8.8 |
| 2/17/05 | Shutdown | 44.7 | 38.4 | 12.2 |
| 3/18/05 | Shutdown | 38.6 | 34.8 | 18.0 |

1.3.7 Recent Landfill Activity

Landfill operations limited integrated and instantaneous surface emission monitoring in some areas of the landfill. Active filling areas where monitoring could not be conducted are shown on Figure 1. In January 2005, active filling locations included Grids 83, 87 89, 95, and 98. Active filling locations in February 2005 included Grids 87, 89, 95, 98, and 102. In March 2005, active filling locations included Grids 66, 68, 72, 73, 80, 81, 83, and 84.

2 SUBSURFACE PERIMETER PROBE MONITORING §1150.1(e)(1)

2.1 Subsurface Perimeter Probe Monitoring Protocol

Subsurface perimeter probe monitoring was performed in January, February, and March, 2005. Monthly gas samples are collected from perimeter probes yielding the highest field-obtained TOC concentrations in percent by volume, measured as methane. Locations of the subsurface perimeter monitoring probes are shown on Figure 1, Surface Emissions Monitoring Site Plan.

Alternative monitoring procedures were used in the area of perimeter probe E-8D. These procedures include monitoring of the probes and performing surface emission monitoring of Grid 31-D, as specified in the Rule 1150.1 Compliance Plan for Bradley Landfill. The alternative procedures are implemented when TOC concentrations meet or exceed five (5) percent by volume, measured as methane.

Static pressure, in inches of water column, was measured prior to evacuating each probe. Probes were evacuated at a continuous rate until a stable methane concentration was observed. During the first quarter of 2005, a calibrated GEM-2000 Gas Extraction Monitor was used to measure methane by percent volume, methane by percent of LEL, oxygen by percent volume, carbon dioxide by percent volume, balance gas (nitrogen) by percent volume and static pressure in inches of water column.

2.2 Subsurface Perimeter Probe Monitoring Results

Perimeter probes with the highest field-obtained TOC concentrations, taken, during the monthly monitoring event for each month, were selected to be sampled for laboratory analysis of TOC as methane. During the monthly probe monitoring events, field readings were taken on January 24 and 25, February 28, and March 30 and 31, 2005 for all probes. On January 24 and 25, 2005, methane was detected in Probes E-8D, W-6, and W-14S at 49.0, 25.8, and 22.7 percent, respectively. On February 28, 2005, methane was detected in Probes E-8D, S-10R, S9-SR, S9-M1, S9-M2, and W-14S at 61.1, 62.0, 22.5, 13.4, 10.0, 44.8, and 100 percent, respectively. On March 30 and 31, 2005, methane was detected in Probe E-8D and W-14S at 59.3 and 100 percent, respectively. Tedlar bag samples were collected from all probes where methane was detected during the January, February, and March monthly monitoring events. Laboratory analysis of gas from Probe E-8D yields more consistent TOC as methane concentrations than readings taken with the GEM 2000. The first quarter 2005 laboratory bag samples collected on January 21,

February 17, and March 31, 2005 from Probe E-8D contained concentrations of 55.6, 55.6, and 53.8 TOC as methane, respectively, as reported by the laboratory. Field and laboratory data for perimeter probe monitoring are provided in Appendix B.

Perimeter probes that were selected to be sampled, during the monthly monitoring event, based on the highest field-obtained TOC as methane concentrations for each month are listed below:

| Table 2-1 Perimeter Probe Sampling Results | | | |
|-------------------------------------------------------------|---------|-------------------------------------------|-----------------------------------------|
| Month | Probe # | Field TOC as methane Concentration (%) | Lab TOC as Methane Concentration (%) |
| Jan-05 | E-8D | 49.0 | 55.6 |
| | W-6 | 25.8 | 30.6 |
| | W-14S | 22.7 | 34.4 |
| Feb-05 | E-8D | 61.1 | 55.6 |
| | S-10R | 62.0 | 43.2 |
| | S9-SR | 22.5 | 20.6 |
| | S9-M1 | 13.4 | 17.0 |
| | S9-M2 | 10.0 | 8.94 |
| | E-14D | 44.8 | 47.6 |
| | W-14S | 100 | 7.77 |
| Mar-05 | E-8D | 59.3 | 53.8 |
| | W-14S | 100 | 79.6 |

Gas in Probe W-14S is not landfill gas as determined by multiple rounds of hydrocarbon speciation, Carbon-14 dating, and further supported by documented naturally occurring deposits of thermogenic gas. Waste Management was granted a variance for this probe by SCAQMD and has requested an exemption from Rule 1150.1.

3 INTEGRATED SURFACE EMISSION SAMPLING §1150.1(e)(2)

3.1 Integrated Surface Emission Sampling Protocol

The first quarter 2005 integrated surface emission monitoring and sampling was conducted on January 20, March 2, and March 22, 2005. Monitoring and sampling were conducted consistent with SCAQMD's Guidelines for Implementation of Rule 1150.1.

Prior to sampling, the landfill surface was divided into approximate 50,000 square-foot grids with the majority of the grids having dimensions 100 feet by 500 feet. Figure 3, Integrated Surface Grids Location Map, shows the location of each grid.

Integrated surface sampling (ISS) equipment, field protocol, and QA procedures used in this program were derived from the SCAQMD Guidelines for Implementation of Rule 1150.1, in accordance with the compliance plan for the landfill. RES Environmental, Inc. (RES) technicians sampled each grid using the walk pattern and collection rate specified in the guidelines. Each portable Integrated Sampler is comprised of a Tedlar bag, DC pump, and a calibrated flow controller. Each bag sampler is calibrated by a film (bubble meter) calibration method. Each Tedlar bag sample was purged three times with ultra-pure nitrogen before sampling and enclosed in a light-sealed box after sampling. Analyses were performed within 72 hours after sampling was conducted. Tedlar bag QA/QC checklist is in Appendix G.

Wind monitoring data recorded at the on-site wind station were reduced to calculate 10-minute average wind speeds for those times when sampling was performed. Each integrated grid sample was collected over a continuous 25-minute period.

RES technicians walked grids at approximate 25-foot intervals for a total of 2,600 linear feet in a period of 25 minutes. The integrated sampler wand was extended to no greater than one inch above the landfill surface. Integrated surface samples were collected at an approximate rate of 333 cubic centimeters per minute (cc/min). The technicians recorded the starting and ending time of each grid traverse, along with the average rotameter flow rate and the prevailing wind speed and direction. An OVA was used to measure the TOC concentration (in ppm, as methane) from each of the 10-liter bag samples collected from the pre-numbered grids.

The landfill sampling grids are divided into Types A, B, and C. All grid types are sampled quarterly. Type A surface grids have no exclusions from sampling, and sampling is conducted in accordance with Rule 1150.1. Type B surface grids contain steep slopes or steep slopes and dense vegetation. Sampling of Type B grids consists of sampling the toe and top of 128 and 130. Grids 121 and 122, each defined as a Type "B" Grid, have been re-designated as Type "A" Grids due to the additional refuse that has been put in place. Vacuum readings from all LFG extraction wells located within Type B grids are recorded monthly and included in the quarterly report. Type C grids are located in the area of active recycling operations. Sampling of Type C surface

grids are performed quarterly, during the integrated sampling event. Sampling of Type C surface grids consists of sampling a course of 2,600 linear feet but not less than 1,900 linear feet in each grid for a continuous 25-minute period, excluding stockpiles, stored equipment and recycling equipment. Vacuum readings from all gas extraction wells located within Type C active recycling grids are recorded monthly and included in the quarterly report. Vacuum readings recorded in the third quarter from the extraction wells located in Type B and C Grids are presented in Table 3-1.

Due to active landfill operations, integrated landfill surface measurements were not obtained for Grids 83, 87, 89, 95, and 98 in January 2005. Integrated landfill surface measurements were not obtained in Grids 66, 68, 72, 73, 80, 81, 83, and 84 in March 2005 due to active landfill operations. In addition, an integrated landfill surface measurement was not obtained in Grid 43 due to well drilling in March 2005.

Tedlar bag samples from Grids 20 and 40 were sent to AtmAA, Inc. for further analysis of toxic air contaminants, methane, and TGNMOs. Technicians responsible for transporting the integrated samples recorded pertinent information on a chain-of custody form included in Appendix C, Integrated Surface Emission Sampling. Additional personnel, including lab technicians, also recorded their signatures on the chain-of-custody form.

Integrated surface samples were collected when the average wind speed was less than five miles per hour and the instantaneous wind speed was less than ten miles per hour. Integrated samples were not collected within 72 hours of a rainstorm. Wind speed and direction measurements are tracked on the chart included in Appendix C, Integrated Surface Emission Sampling. Other weather data taken during integrated monitoring can also be found in Appendix C.

3.2 Integrated Surface Monitoring Results

The TOC as methane concentration collected from each grid is listed in Table 3-1, Integrated Surface Sampling Field Summary. Field data sheets are presented in Appendix C. All of the integrated TOC as methane readings were within compliance limits, as set forth by SCAQMD Rule 1150.1. Typically, the two samples having the highest field TOC as methane concentrations are sent to the laboratory for further analysis. The TOC as methane background reading was 5.0 ppm. During surface emissions monitoring, TOC as methane concentrations above background were no more than 1 ppm. Samples from Grids 20 and 40 were selected for laboratory analysis.

3.3 Integrated Surface Sampling Laboratory Results

Integrated samples were collected from Grids 20 and 40 and were transported to AtmAA, Inc. on March 22, 2005 for further analysis. Table 3-2, Integrated Surface Sampling, Laboratory Summary, lists the laboratory analysis methods and results.

Laboratory analysis by Method TO-15 of the sample from Grid 20 (Lab Sample ID 00835-14) detected benzene, dichloromethane, carbon tetrachloride, toluene, and xylenes. The TGNMO concentration was 1.75 ppmv and the methane concentration was 5.95 ppmv.

Laboratory analysis by Method TO-15 of the sample from Grid 40 (Lab Sample ID 00835-15) detected benzene, dichloromethane, carbon tetrachloride, toluene, and xylenes. The TGNMO concentration was 1.98 ppmv and the methane concentration was 7.06 ppmv.

Table 3-1
Integrated Surface Sampling, Field Summary
Bradley Landfill and Recycling Center
Sun Valley, California

INSTRUMENT OVA 128/88 DATE OF SAMPLING: 1/20/05, 3/2/05, and 3/22/05
88-ISS Packs TECHNICIAN: RES Environmental Inc.(RES)

| Grid I.D. | TOC CONCENTRATION ABOVE BACKGROUND LEVELS (ppmv) | Sample Date | ACTION TAKEN TO REPAIR LEAK | DATE OF REPAIR | DATE OF ANY REQUIRED RE- MONITORING | RE-MONITORED CONCENTRATION (ppmv) |
|-----------|--------------------------------------------------------------|----------------|--------------------------------|-------------------|-------------------------------------------|-----------------------------------------|
| 1 | 0 | 3/2/2005 | NA | | | |
| 2 | 0 | 3/2/2005 | NA | | | |
| 3 | 0 | 3/2/2005 | NA | | | |
| 4 | 0 | 3/2/2005 | NA | | | |
| 5 | 0 | 3/2/2005 | NA | | | |
| 6 | 0 | 3/2/2005 | NA | | | |
| 7 | 0 | 3/2/2005 | NA | | | |
| 8 | 0 | 3/2/2005 | NA | | | |
| 9 | 0 | 1/20/2005 | NA | | | |
| 9 | 0 | 3/2/2005 | NA | | | |
| 10 | 0 | 3/2/2005 | NA | | | |
| 20 | 0 | 1/20/2005 | NA | | | |
| 21 | 0 | 1/20/2005 | NA | | | |
| 22 | 1 | 1/20/2005 | NA | | | |
| 23 | 0 | 1/20/2005 | NA | | | |
| 24 | 0 | 3/22/2005 | NA | | | |
| 31 | 0 | 3/22/2005 | NA | | | |
| 32 | 0 | 1/20/2005 | NA | | | |
| 33 | 0 | 1/20/2005 | NA | | | |
| 34 | 0 | 1/20/2005 | NA | | | |
| 35 | 0 | 1/20/2005 | NA | | | |
| 36 | 0 | 3/2/2005 | NA | | | |
| 37 | 0 | 1/20/2005 | NA | | | |
| 38 | 0 | 3/2/2005 | NA | | | |
| 39 | 0 | 1/20/2005 | NA | | | |
| 40 | 0 | 3/22/2005 | NA | | | |
| 41 | 0 | 3/2/2005 | NA | | | |
| 42 | 0 | 3/2/2005 | NA | | | |
| 43 | 0 | 3/2/2005 | NA | | | |
| 44 | 0 | 3/2/2005 | NA | | | |
| 45 | 0 | 3/22/2005 | NA | | | |
| 46 | 0 | 3/22/2005 | NA | | | |
| 47 | 0 | 3/22/2005 | NA | | | |
| 48 | 0 | 3/2/2005 | NA | | | |
| 49 | 0 | 3/22/2005 | NA | | | |
| 50 | 0 | 3/2/2005 | NA | | | |
| 51 | 0 | 3/2/2005 | NA | | | |
| 52 | 0 | 3/22/2005 | NA | | | |
| 53 | 0 | 3/2/2005 | NA | | | |
| 54 | 0 | 3/2/2005 | NA | | | |
| 55 | 0 | 3/22/2005 | NA | | | |
| 56 | 0 | 3/2/2005 | NA | | | |
| 57 | 0 | 3/2/2005 | NA | | | |
| 58 | 0 | 3/2/2005 | NA | | | |
| 59 | 0 | 3/22/2005 | NA | | | |
| 60 | 0 | 3/22/2005 | NA | | | |
| 61 | 0 | 3/22/2005 | NA | | | |
| 63 | 0 | 1/20/2005 | NA | | | |
| 64 | 0 | 3/2/2005 | NA | | | |
| 65 | 0 | 3/22/2005 | NA | | | |
| 67 | 0 | 3/2/2005 | NA | | | |
| 69 | 0 | 3/2/2005 | NA | | | |
| 70 | 0 | 3/2/2005 | NA | | | |
| 71 | 0 | 3/2/2005 | NA | | | |

Table 3-1
Integrated Surface Sampling, Field Summary
Bradley Landfill and Recycling Center
Sun Valley, California

INSTRUMENT OVA 128/88 DATE OF SAMPLING: 1/20/05, 3/2/05, and 3/22/05
88-ISS Packs TECHNICIAN: RES Environmental Inc.(RES)

| Grid I.D. | TOC CONCENTRATION ABOVE BACKGROUND LEVELS (ppmv) | Sample Date | ACTION TAKEN TO REPAIR LEAK | DATE OF REPAIR | DATE OF ANY REQUIRED RE- MONITORING | RE-MONITORED CONCENTRATION (ppmv) |
|-----------|--------------------------------------------------------------|----------------|--------------------------------|-------------------|-------------------------------------------|-----------------------------------------|
| 74 | 0 | 1/20/2005 | NA | | | |
| 75 | 0 | 3/2/2005 | NA | | | |
| 76 | 0 | 3/2/2005 | NA | | | |
| 77 | 0 | 3/2/2005 | NA | | | |
| 78 | 0 | 3/2/2005 | NA | | | |
| 79 | 0 | 3/2/2005 | NA | | | |
| 82 | 0 | 3/2/2005 | NA | | | |
| 85 | 0 | 1/20/2005 | NA | | | |
| 86 | 0 | 3/2/2005 | NA | | | |
| 87 | 0 | 3/22/2005 | NA | | | |
| 88 | 0 | 3/2/2005 | NA | | | |
| 89 | 0 | 3/22/2005 | NA | | | |
| 90 | 0 | 1/20/2005 | NA | | | |
| 91 | 0 | 1/20/2005 | NA | | | |
| 92 | 0 | 1/20/2005 | NA | | | |
| 93 | 0 | 3/2/2005 | NA | | | |
| 94 | 0 | 3/2/2005 | NA | | | |
| 95 | 0 | 3/22/2005 | NA | | | |
| 96 | 0 | 1/20/2005 | NA | | | |
| 97 | 0 | 3/2/2005 | NA | | | |
| 98 | 0 | 3/22/2005 | NA | | | |
| 100 | 0 | 1/20/2005 | NA | | | |
| 101 | 0 | 1/20/2005 | NA | | | |
| 102 | 0 | 1/20/2005 | NA | | | |
| 103 | 0 | 1/20/2005 | NA | | | |
| 104 | 0 | 1/20/2005 | NA | | | |
| 105 | 0 | 1/20/2005 | NA | | | |
| 106 | 0 | 1/20/2005 | NA | | | |
| 107 | 0 | 1/20/2005 | NA | | | |
| 108 | 0 | 1/20/2005 | NA | | | |
| 109 | 0 | 1/20/2005 | NA | | | |
| 110 | 0 | 1/20/2005 | NA | | | |
| 111 | 0 | 1/20/2005 | NA | | | |
| 112 | 0 | 1/20/2005 | NA | | | |
| 113 | 0 | 1/20/2005 | NA | | | |
| 114 | 0 | 1/20/2005 | NA | | | |
| 115 | 0 | 1/20/2005 | NA | | | |
| 116 | 0 | 1/20/2005 | NA | | | |
| 117 | 0 | 1/20/2005 | NA | | | |
| 118 | 0 | 1/20/2005 | NA | | | |
| 119 | 0 | 1/20/2005 | NA | | | |
| 120 | 0 | 1/20/2005 | NA | | | |
| 121 | 0 | 1/20/2005 | NA | | | |
| 122 | 0 | 1/20/2005 | NA | | | |
| 123 | 0 | 1/20/2005 | NA | | | |
| 124 | 0 | 1/20/2005 | NA | | | |
| 125 | 0 | 1/20/2005 | NA | | | |
| 126 | 0 | 1/20/2005 | NA | | | |
| 127 | 0 | 1/20/2005 | NA | | | |
| 128 | 0 | 1/20/2005 | NA | | | |
| 130 | 0 | 1/20/2005 | NA | | | |
| 131 | 0 | 1/20/2005 | NA | | | |
| 132 | 0 | 1/20/2005 | NA | | | |

Table 3-1
Integrated Surface Sampling, Field Summary
Bradley Landfill and Recycling Center
Sun Valley, California

INSTRUMENT OVA 128/88 DATE OF SAMPLING: 1/20/05, 3/2/05, and 3/22/05
88-ISS Packs TECHNICIAN: RES Environmental Inc.(RES)

| Grid I.D. | TOC CONCENTRATION ABOVE BACKGROUND LEVELS (ppmv) | Sample Date | ACTION TAKEN TO REPAIR LEAK | DATE OF REPAIR | DATE OF ANY REQUIRED RE- MONITORING | RE-MONITORED CONCENTRATION (ppmv) |
|-----------------------------|--------------------------------------------------------------|----------------|--------------------------------|-------------------|-------------------------------------------|-----------------------------------------|
| Active Dumping Areas | | | | | | |
| 66 | N/A | 3/22/2005 | N/A | | | |
| 68 | N/A | 3/22/2005 | N/A | | | |
| 72 | N/A | 3/22/2005 | N/A | | | |
| 73 | N/A | 3/22/2005 | N/A | | | |
| 80 | N/A | 3/22/2005 | N/A | | | |
| 81 | N/A | 3/22/2005 | N/A | | | |
| 83 | N/A | 3/22/2005 | N/A | | | |
| 84 | N/A | 3/22/2005 | N/A | | | |
| Well Drilling Areas | | | | | | |
| 43 | N/A | 3/22/2005 | N/A | | | |

A background level of 5 ppm was used.

Table 3-2
Integrated Surface Sampling Laboratory Summary
Bradley Landfill & Recycling Center (BLRC)
March 24, 2005

| SCAQMD Rule 1150.1 Components Analysis in Integrated Surface Tedlar Bag Samples | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|--------------------------------------|---------------------------|
| Compound | Sample ISS Grid 20 Results (ppbV) | Sample ISS Grid 40 Results (ppbV) | Reporting Limit (ppbV) |
| Hydrogen Sulfide | <50 | <50 | 50 |
| Benzene | 0.54 | 0.52 | 0.1 |
| Benzyl Chloride | <0.4 | <0.4 | 0.4 |
| Carbon Tetrachloride | 0.12 | 0.12 | 0.1 |
| Chlorobenzene | <0.1 | <0.1 | 0.1 |
| Chloroform | <0.1 | <0.1 | 0.1 |
| 1,1-Dichloroethane | <0.1 | <0.1 | 0.1 |
| 1,1-Dichloroethylene | <0.1 | <0.1 | 0.1 |
| 1,2-Dibromoethane | <0.1 | <0.1 | 0.1 |
| Dichlorobenzenes ⁽¹⁾ | <1.1 | <1.1 | 1.1 |
| Dichloromethane | 0.68 | 1.12 | 0.1 |
| 1,2-Dichloroethane | <0.1 | <0.1 | 0.1 |
| 1,1,1-Trichloroethane | <0.1 | <0.1 | 0.1 |
| Trichloroethene | <0.1 | <0.1 | 0.1 |
| Perchloroethene | <0.1 | <0.1 | 0.1 |
| Toluene | 4.76 | 7.19 | 0.3 |
| Total Xylenes* | 1.81 | 2.13 | 0.1 |
| Vinyl Chloride | <0.1 | <0.1 | 0.1 |
| SCAQMD Rule 1150.1 Components Analysis in Integrated Surface Tedlar Bag Samples | | | |
| Compound | Sample ISS Grid 20 Results (ppmV) | Sample ISS 40 Results (ppmV) | Reporting Limit (ppmV) |
| Methane | 5.95 | 7.06 | 1 |
| Total Non-Methane Organics (as methane) | 1.75 | 1.98 | 1 |
| <p>< Not detected at or above the method detection limit.</p> <p>*Total xylenes reported includes the sum of the detected concentrations of m- & p-xylenes and o-xylenes.</p> <p>(1) total amount containing meta, para, and ortho isomers</p> | | | |

TABLE 3-3
LFG Well Data for "B" and "C" Monitoring Grids
First Quarter 2005
Bradley Landfill, Sun Valley, California

| Device ID | Date/Time mm/dd/yy | CH4 (%) | CO2 (%) | O2 (%) | Balance | Current Static Pressure | Adjusted Static Pressure | Current Differential Pressure | Current Flow | Adjusted Flow | Current Temperature | Comments | Grid Type |
|-----------|-----------------------|------------|------------|-----------|---------|-------------------------------|--------------------------------|-------------------------------------|-----------------|------------------|------------------------|---------------|-----------|
| BR000001 | 1/4/2005 8:24 | 28.8 | 28.9 | 0 | 42.3 | -6.3 | -6.3 | 3.329 | 30 | 30 | 1 | Min Flow | C |
| BR000001 | 2/17/2005 14:02 | 46.8 | 32.2 | 0.7 | 20.3 | -1.5 | -2.6 | 2.242 | 24 | 22 | 57 | 1/4 open | C |
| BR000001 | 3/9/2005 9:19 | 30.1 | 30.4 | 0 | 39.5 | -7.8 | -7.6 | 14.297 | 129 | 132 | 130 | 1/4 open | C |
| BR000002 | 1/4/2005 8:45 | 19.4 | 25.3 | 0 | 55.3 | -8.5 | -2.2 | 2.146 | 21 | 3 | 120 | Min Flow | C |
| BR000002 | 2/8/2005 10:10 | 35.9 | 32.4 | 2.2 | 29.5 | -0.9 | -0.9 | 0.04 | 3 | 3 | 112 | Min Flow | C |
| BR000002 | 3/1/2005 11:06 | 33.8 | 35.1 | 0 | 31.1 | -1.3 | -1.3 | 0.054 | 108 | 2 | 3 | less 1/4 open | C |
| BR000003 | 1/4/2005 9:44 | 0.3 | 5.3 | 18.1 | 76.3 | -0.4 | -0.4 | 0.029 | 2 | 2 | 0 | Disconnected | C |
| BR000003 | | | | | | | | | | | | Disconnected | C |
| BR000003 | | | | | | | | | | | | Disconnected | C |
| BR000004 | 1/4/2005 10:21 | 13.9 | 17.6 | 0 | 68.5 | -8.8 | -6.7 | 1.647 | 19 | 19 | 126 | Min Flow | C |
| BR000004 | 2/8/2005 10:55 | 16 | 17.7 | 0.9 | 65.4 | -7.4 | -7.5 | 1.75 | 19 | 18 | 129 | Min Flow | C |
| BR000004 | 3/1/2005 11:34 | 15.9 | 20.6 | 0 | 63.5 | -6 | -2.9 | 0.556 | 124 | 22 | 11 | less 1/4 open | C |
| BR000005 | 1/4/2005 10:40 | 1.4 | 9.6 | 3.5 | 85.5 | -2.1 | -2 | 1.932 | 2 | 2 | 104 | Min Flow | C |
| BR000005 | 2/24/2005 13:49 | 0.5 | 7.1 | 1.4 | 91 | -17.1 | -18.1 | 1.717 | 45 | 46 | 83 | Min Flow | C |
| BR000005 | | | | | | | | | | | | Disconnected | C |
| BR000006 | 1/4/2005 10:49 | 12.4 | 21.6 | 0 | 66 | -1.6 | -1.2 | 0.73 | 12 | 9 | 119 | Min Flow | C |
| BR000006 | 2/8/2005 11:32 | 11.9 | 20.7 | 0.7 | 66.7 | -1 | -1 | 0.374 | 9 | 9 | 119 | Min Flow | C |
| BR000006 | 3/1/2005 11:52 | 6.4 | 17.9 | 1.5 | 75.7 | -0.8 | -0.7 | 0.405 | 129 | 9 | 9 | less 1/4 open | C |
| BR000007 | 1/4/2005 11:28 | 21.3 | 25.6 | 0 | 53.1 | -1.3 | -1.1 | 0.125 | 5 | 4 | 0 | Min Flow | C |
| BR000007 | 2/16/2005 15:13 | 28.2 | 27.6 | 4.2 | 40 | | -17.5 | N/A | | 4 | 107 | Min Flow | C |
| BR000007 | 3/3/2005 8:46 | 19.3 | 25.6 | 0.6 | 54.5 | -8.7 | -8.3 | 3.857 | 114 | 32 | 29 | 3/4 open | C |
| BR000008 | 1/4/2005 11:23 | 9.7 | 17.3 | 3.3 | 69.7 | -8.6 | 0 | 1.165 | 16 | 2 | 76 | Min Flow | C |
| BR000008 | 2/24/2005 14:03 | 21.2 | 25.9 | 1 | 51.9 | -11.5 | -12 | 4.369 | 31 | 30 | 129 | Min Flow | C |
| BR000008 | | | | | | | | | | | | Disconnected | C |
| BR000009 | 1/4/2005 11:15 | 32.7 | 31.2 | 0 | 36.1 | -12.1 | -12.1 | 1.785 | 16 | 15 | 120 | 1/4 Open | C |
| BR000009 | 2/8/2005 12:15 | 33.5 | 30.9 | 0.9 | 34.7 | -9.4 | -9.7 | 0.708 | 10 | 10 | 120 | 1/4 Open | C |
| BR000009 | 3/9/2005 9:40 | 35.1 | 33.6 | 0 | 31.3 | -7.8 | -7.9 | 1.027 | 119 | 11 | 12 | 1/2 open | C |
| BR000010 | 1/4/2005 13:58 | 46.3 | 36.5 | 0 | 17.2 | -18 | -17.8 | 12.218 | 0 | 0 | 130 | 3/4 Open | C |
| BR000010 | 2/24/2005 14:42 | 53.1 | 39.7 | 0.1 | 7.1 | -11.9 | -12.8 | 1.412 | 15 | 15 | 115 | 3/4 Open | C |
| BR000010 | 3/3/2005 10:16 | 52.6 | 39.6 | 0 | 7.8 | -11.7 | -11.7 | 1.106 | 70 | 14 | 14 | Full Open | C |
| BR000011 | 1/4/2005 14:06 | 37.9 | 30.1 | 4.7 | 27.3 | -17.9 | -18.4 | 0.11 | 4 | 1 | 0 | 3/4 Open | C |
| BR000011 | 2/23/2005 11:54 | 57 | 41.4 | 0 | 1.6 | -12.8 | -13.7 | | | 32 | 72 | Full open | C |
| BR000011 | 3/9/2005 9:48 | 54.8 | 42.2 | 0 | 3 | -11.9 | -12.3 | 0.562 | 138 | 22 | 21 | 1/4 open | C |
| BR000014 | 1/4/2005 9:16 | 14.3 | 20.1 | 0 | 65.6 | -1.7 | -1.2 | 1.364 | 17 | 14 | 130 | Disconnected | C |
| BR000014 | 2/8/2005 11:02 | 14.6 | 19.5 | 0.5 | 65.4 | -6.1 | -4.7 | 3.378 | 27 | 27 | 132 | Closed | C |
| BR000014 | | | | | | | | | | | | Disconnected | C |

TABLE 3-3
LFG Well Data for "B" and "C" Monitoring Grids
First Quarter 2005
Bradley Landfill, Sun Valley, California

| Device ID | Date/Time mm/dd/yy | CH4 (%) | CO2 (%) | O2 (%) | Balance | Current Static Pressure | Adjusted Static Pressure | Current Differential Pressure | Current Flow | Adjusted Flow | Current Temperature | Comments | Grid Type |
|-----------|-----------------------|------------|------------|-----------|---------|-------------------------------|--------------------------------|-------------------------------------|-----------------|------------------|------------------------|---------------|-----------|
| BR000015 | 1/4/2005 9:33 | 11.8 | 17.2 | <<< | N/A | -11.5 | -4.5 | 9.921 | | | 76 | Disconnected | C |
| BR000015 | 2/24/2005 13:27 | 20.6 | 16.2 | 1.5 | 61.7 | 0.2 | 0.1 | 0.023 | 5 | 3 | 78 | Closed | C |
| BR000015 | | | | | | | | | | | | Disconnected | C |
| BR000016 | 1/17/2005 13:47 | 37.7 | 26.6 | 0 | 35.7 | -19.9 | -19.8 | 3.586 | 23 | 23 | 111 | Min Flow | C |
| BR000016 | 2/24/2005 13:19 | 33.9 | 29.5 | 0 | 36.6 | -14.3 | -12.5 | 0.907 | 12 | 10 | 94 | 1/2 open | C |
| BR000016 | | | | | | | | | | | | Disconnected | C |
| BR000017 | 1/4/2005 11:04 | 16.4 | 24.5 | 0 | 59.1 | -11 | -10.7 | 2.752 | 22 | 21 | 0 | 1/2 Open | C |
| BR000017 | 2/24/2005 13:39 | 17.2 | 24.6 | 0.1 | 58.1 | -7.6 | -7.6 | 1.913 | 17 | 16 | 103 | 1/2 Open | C |
| BR000017 | 3/1/2005 11:57 | 15.8 | 25.1 | 0 | 59.1 | -1.6 | N/A | 0.16 | 3 | 2 | 1.9 | less 1/4 open | C |
| BR000018 | 1/4/2005 10:31 | 14.2 | 17.5 | 0 | 68.3 | -17.8 | -17.6 | 0.24 | 0 | 0 | 106 | Min Flow | C |
| BR000018 | 2/8/2005 11:13 | 14.1 | 16.3 | 0.9 | 63.9 | -12.9 | -12.9 | 0.422 | 22 | 22 | 113 | Min Flow | C |
| BR000018 | 3/1/2005 11:39 | 16.1 | 19.8 | 0 | 64.1 | -12.9 | N/A | -0.08 | 0 | 10 | 9.7 | less 1/4 open | C |
| BR000019 | 1/20/2005 8:09 | 44 | 35.4 | 0.1 | -7.1 | -10.8 | -2.263 | 3.07 | | 27 | 69 | 3/4 open | C |
| BR000019 | 2/7/2005 9:27 | 39.6 | 31.1 | 3 | 26.3 | | -10.6 | N/A | 22 | 24 | 103 | 3/4 open | C |
| BR000019 | 3/1/2005 11:11 | 48.8 | 37.7 | 0 | 13.5 | -7.4 | N/A | 1.85 | 24 | 21 | 62.2 | 3/4 open | C |
| BR000020 | 1/5/2005 9:37 | 29.9 | 26 | 0 | 44.1 | -7.3 | -7.2 | 0.95 | 14 | 14 | 120 | 1/4 Open | C |
| BR000020 | 2/7/2005 10:41 | 32.9 | 28.3 | 0 | 38.8 | | -5.7 | N/A | 19 | 18 | 102 | 1/4 Open | C |
| BR000020 | 3/1/2005 13:19 | 39 | 31.7 | 0 | 29.3 | -3 | N/A | 0.76 | 14 | 14 | 33.1 | less 1/4 open | C |
| BR000021 | 1/5/2005 9:31 | 28 | 25.8 | 0.2 | 46 | -4.6 | -4.5 | 0.913 | 14 | 13 | 150 | 1/4 Open | C |
| BR000021 | 2/8/2005 15:28 | 33.1 | 25.2 | 0.5 | 41.2 | -2.5 | -2.4 | 1.94 | 21 | 21 | 152 | 1/4 Open | C |
| BR000021 | 3/1/2005 13:13 | 37.6 | 30.1 | 0 | 32.3 | -1.3 | N/A | 0.74 | 15 | 16 | 36.5 | less 1/4 open | C |
| BR000022 | 1/4/2005 13:30 | 36.3 | 29 | 3 | 31.7 | -13.4 | -12.7 | 1.864 | 18 | 17 | 0 | 1/4 Open | C |
| BR000022 | 2/24/2005 13:58 | 19.5 | 16 | 10.8 | 53.7 | -9.1 | -9.7 | 3.786 | 57 | 56 | 88 | 1/4 open | C |
| BR000022 | | | | | | | | | | | | Disconnected | C |
| BR000025 | 1/4/2005 14:19 | 59.3 | 40.6 | 0 | 0.1 | -4.3 | -4.3 | 13.921 | 0 | 0 | 0 | Min Flow | C |
| BR000025 | 2/8/2005 12:05 | 60.3 | 37.6 | 1.9 | 0.2 | -0.3 | -5.9 | 0.19 | 0 | 36 | 71 | Full open | C |
| BR000025 | 3/8/2005 11:00 | 56.1 | 41.3 | 0.6 | 2 | -5.7 | -5.9 | 1.062 | 110 | 35 | 36 | Full Open | C |
| BR000026 | 1/12/2005 8:24 | 48.6 | 37.7 | 0 | N/A | -19.7 | -20.3 | 20.738 | 0 | 0 | 118 | Full Open | C |
| BR000026 | 2/24/2005 14:48 | 50.5 | 37.7 | 0.1 | 11.7 | -11.3 | 0 | 15.103 | NFD | NFD | 77 | Full Open | C |
| BR000026 | | | | | | | | | | | | Disconnected | C |
| BR000027 | 1/4/2005 13:36 | 32.6 | 31.1 | 0 | 36.3 | -13.2 | -13.8 | 3.309 | 27 | 26 | 130 | 1/4 Open | C |
| BR000027 | 1/4/2005 13:36 | 32.6 | 31.1 | 0 | 36.3 | -13.2 | -13.8 | 3.309 | 27 | 26 | 130 | 1/4 Open | C |
| BR000027 | 2/8/2005 12:34 | 33.1 | 29.7 | 1.5 | 35.7 | -6.4 | -6.9 | 3.57 | 28 | 28 | 131 | 1/4 Open | C |
| BR000027 | | | | | | | | | | | | Disconnected | C |
| BR000028 | 1/4/2005 14:33 | 33.5 | 32 | 0 | 34.5 | -22 | -22.1 | 21.806 | 0 | 0 | 0 | Min Flow | C |
| BR000028 | 2/24/2005 14:26 | 39 | 33.2 | 0.2 | 27.6 | -6.1 | -5.8 | 6.248 | NFD | NFD | 75 | Min Flow | C |

TABLE 3-3
LFG Well Data for "B" and "C" Monitoring Grids
First Quarter 2005
Bradley Landfill, Sun Valley, California

| Device ID | Date/Time mm/dd/yy | CH4 (%) | CO2 (%) | O2 (%) | Balance | Current Static Pressure | Adjusted Static Pressure | Current Differential Pressure | Current Flow | Adjusted Flow | Current Temperature | Comments | Grid Type |
|-----------|-----------------------|------------|------------|-----------|---------|-------------------------------|--------------------------------|-------------------------------------|-----------------|------------------|------------------------|--------------|-----------|
| BR000028 | | | | | | | | | | | | Disconnected | C |
| BR000029 | 1/17/2005 15:34 | 1.1 | 0.2 | 19.6 | 79.1 | 0 | -0.3 | -0.049 | | | 140 | Disconnected | C |
| BR000029 | | | | | | | | | | | | Disconnected | C |
| BR000029 | | | | | | | | | | | | Disconnected | C |
| BR000031 | 1/5/2005 10:48 | 1.1 | 16.5 | 0.7 | 81.7 | 8.7 | 8.8 | -16.663 | | | 0 | 1/4 Open | C |
| BR000031 | 2/8/2005 11:12 | 38.9 | 60.8 | 0.1 | 0.2 | -1.2 | -0.5 | 0.706 | 12 | 7 | 65 | Min flow | C |
| BR000031 | | | | | | | | | | | | Disconnected | C |
| BR000033 | 1/5/2005 11:09 | 11.7 | 20.9 | 0 | 67.4 | -5.1 | -5.7 | -6.433 | | | 0 | 3/4 Open | C |
| BR000033 | 2/25/2005 14:33 | 34.3 | 31.6 | 0 | 34.1 | | -8.8 | | | 37 | 117 | Full open | C |
| BR000033 | | | | | | | | | | | | Disconnected | C |
| BR000034 | 1/5/2005 11:39 | 6.5 | 18.4 | 0 | 75.1 | -4.4 | -4.6 | -6.107 | | | 0 | Min Flow | C |
| BR000034 | 2/25/2005 8:33 | 9.4 | 21.9 | 0.1 | 68.6 | | -10.8 | | 43 | 44 | 110 | Full open | C |
| BR000034 | 3/16/2005 10:59 | 12.2 | 23 | 0.4 | 64.4 | -3.5 | -3.5 | 3.151 | 146 | 25 | 26 | Full Open | C |
| BR000036 | 1/5/2005 12:19 | 4.2 | 16.8 | 0.8 | 78.2 | -50 | -49.7 | <<< | | | 0 | Min Flow | C |
| BR000036 | 2/25/2005 8:58 | 4.8 | 18.9 | 0.9 | 75.4 | -4.2 | -9.7 | N/A | 12 | 13 | 107 | 3/4 open | C |
| BR000036 | | | | | | | | | | | | Disconnected | C |
| BR000039 | 1/5/2005 12:34 | 8.4 | 17.5 | 0 | 74.1 | -90.5 | -90.1 | <<< | | | 0 | 1/2 Open | B |
| BR000039 | 2/25/2005 13:54 | 15.7 | 24.4 | 0.1 | 59.8 | | -8.4 | | | 38 | 66 | Full open | B |
| BR000039 | 3/2/2005 8:41 | 15.4 | 24.4 | 0 | 60.2 | -2.6 | -2.7 | 4.372 | 69 | 45 | 45 | Full Open | B |
| BR000084 | 1/4/2005 8:35 | 54.1 | 41.3 | 0 | 4.6 | -29.2 | -29.4 | 22.886 | 64 | 63 | 0 | Full Open | C |
| BR000084 | 2/8/2005 15:43 | 52.6 | 40.3 | 0.6 | 6.5 | -25 | -23.5 | -21.994 | 81 | 80 | 132 | Full Open | C |
| BR000084 | | | | | | | | | | | | Disconnected | C |
| BR00023D | 1/5/2005 9:50 | 45.2 | 34.4 | 0 | 20.4 | -13 | -0.1 | 0.189 | 0 | 0 | 0 | Full Open | C |
| BR00023D | 2/8/2005 15:11 | 46.1 | 35.8 | 1 | 17.1 | -11 | -10.4 | 0.621 | 3 | 4 | 117 | Full Open | C |
| BR00023D | | | | | | | | | | | | Closed 3/15 | C |
| BR00023S | 1/5/2005 9:45 | 53.8 | 37.5 | 0 | 8.7 | -0.1 | -0.1 | -0.025 | 0 | 0 | 0 | Full Open | C |
| BR00023S | 2/8/2005 15:16 | 50.4 | 37.5 | 1 | 11.1 | -11.8 | -12.3 | 2.272 | 5 | 4 | 120 | Full Open | C |
| BR00023S | 3/1/2005 13:31 | 55.5 | 39.8 | 0.1 | 4.7 | -0.1 | N/A | 0.11 | 5 | 4 | 13.4 | 3/4 open | C |
| BR00038D | 1/5/2005 11:58 | 25.5 | 24.5 | 0.4 | 49.6 | -35.6 | -7.3 | 26.031 | 0 | 0 | 102 | Min Flow | C |
| BR00038D | 2/25/2005 14:03 | 46.3 | 32.3 | 0.1 | 21.3 | | -6.2 | | | 0 | N/A | Full open | C |
| BR00038D | 3/2/2005 9:15 | 47.7 | 32.2 | 0 | 20.1 | -6.5 | -6.5 | 8.439 | 67 | 0 | 0 | Full Open | C |
| BR00105D | 1/5/2005 10:04 | 46.5 | 35.1 | 2.4 | 16 | -12.7 | -10 | 0.04 | 0 | 0 | 0 | Full Open | C |
| BR00105D | 2/8/2005 14:47 | 47.8 | 34.2 | 3.7 | 14.3 | -10.9 | -10.6 | 1.356 | 0 | 0 | 117 | Full Open | C |
| BR00105D | | | | | | | | | | | | Disconnected | C |
| BR00105S | 1/5/2005 10:08 | 51.2 | 37.3 | 0 | 11.5 | -6.3 | -6.1 | 17.952 | 0 | 0 | 0 | 3/4 Open | C |
| BR00105S | 2/8/2005 14:54 | 52.1 | 38.9 | 0.2 | 8.8 | -3.6 | -3.5 | 5.104 | NFD | NFD | 131 | 3/4 Open | C |

TABLE 3-3
LFG Well Data for "B" and "C" Monitoring Grids
First Quarter 2005
Bradley Landfill, Sun Valley, California

| Device ID | Date/Time mm/dd/yy | CH4 (%) | CO2 (%) | O2 (%) | Balance | Current Static Pressure | Adjusted Static Pressure | Current Differential Pressure | Current Flow | Adjusted Flow | Current Temperature | Comments | Grid Type |
|-----------|-----------------------|------------|------------|-----------|---------|-------------------------------|--------------------------------|-------------------------------------|-----------------|------------------|------------------------|--------------|-----------|
| BR00105S | | | | | | | | | | | | Disconnected | C |
| BR00106D | 1/5/2005 10:18 | 55.5 | 40.8 | 0 | 3.7 | -18 | -17.5 | 17.469 | 0 | 0 | 120 | Min Flow | C |
| BR00106D | 2/8/2005 11:41 | 56.3 | 40.8 | 0.1 | 2.8 | -17.3 | -17.1 | 18.122 | NFD | NFD | 0 | 3/4 open | C |
| BR00106D | | | | | | | | | | | | Disconnected | C |
| BR00106S | 1/17/2005 15:23 | 53.4 | 35.7 | 0 | 10.9 | -1.3 | -1.3 | 0.017 | 4 | 8 | 0 | Full Open | C |
| BR00106S | 2/8/2005 11:46 | 44.6 | 35.8 | 0 | 19.6 | -1.4 | -1.4 | 2.668 | 51 | 51 | 0 | 3/4 open | C |
| BR00106S | | | | | | | | | | | | Disconnected | C |
| BR0EW100 | 1/4/2005 13:50 | 14.4 | 23.6 | 0 | 62 | -17.9 | -18.2 | 17.534 | 293 | 295 | 0 | Min Flow | C |
| BR0EW100 | 2/7/2005 12:54 | 15.7 | 24.5 | 0 | 59.8 | | -5 | | 24 | 25 | 84 | Min Flow | C |
| BR0EW100 | | | | | | | | | | | | Disconnected | C |
| BR0EW101 | 1/17/2005 13:51 | <<< | 1.7 | 19.4 | N/A | 0 | 0 | -0.011 | | | 0 | Disconnected | C |
| BR0EW101 | 2/16/2005 11:26 | 0.3 | 0 | 20 | 79.7 | | 0.3 | N/A | | | 0 | Disconnected | C |
| BR0EW101 | | | | | | | | | | | | Disconnected | C |

4 INSTANTANEOUS SURFACE EMISSION MONITORING§1150.1(e)(3)

4.1 Instantaneous Surface Emission Monitoring Protocol

Quarterly instantaneous surface emission monitoring was conducted in January, February, and March 2005 by RES Inc. technicians and consisted of monitoring the landfill surface for the presence of LFG surface emissions. Instantaneous Surface Monitoring (ISM) was performed using procedures and equipment described in the SCAQMD Guidelines for Implementation of Rule 1150.1 and was consistent with the compliance plan for the Landfill.

A portable flame ionization detector (FID), which meets or exceeds all guideline specifications was used to obtain instantaneous measurements of TOC as methane concentrations immediately above the surface of the grids. Calibrations were performed on the OVA equipment using factory specifications. While traversing the disposal area, the detector probe was held within 0 to 3 inches above the landfill surface to obtain the readings. A surface inspection was also performed during monitoring to identify potential cracks in the landfill cover.

Using the OVA, RES technicians walked a pattern across the landfill surface consisting of linear traverses approximately 100 feet apart at an approximate rate of 100 to 110 feet per minute. TOC as methane measurements were recorded at approximately every 100 linear feet. While monitoring, the OVA wand and funnel assembly was held no further than 0 to 3 inches above the landfill surface.

In addition to walking the traverses, the OVA was used by EMCON/OWT personnel to measure TOC as methane concentrations at landfill surface fissures, along the refuse/natural soil interface, and at corrugated metal pipes, gas extraction wells and other points visually identified as areas potentially having repeatable TOC as methane concentrations greater than 500 ppm.

The landfill sampling grids are divided into Types A, B, and C. Type A surface grids have no exclusions from sampling and sampling is conducted in accordance with Rule 1150.1. Type B surface grids contain steep slopes or steep slopes and dense vegetation. Sampling of Type B grids consists of sampling the toe and top of Grids 128 and 130. Vacuum readings from gas extraction well 39, located within a Type B grid, is recorded monthly and included in the quarterly report. Twenty-two Type C grids are located in the area of active recycling operations. Sampling of Type C surface grids consists of sampling a course of 2,600 linear feet but not less than 1,900 linear feet in each grid for a continuous 25-minute period, excluding stockpiles, stored equipment and recycling equipment. Vacuum readings from all LFG extraction wells located within Type C active recycling grids are recorded monthly and included in the quarterly report. Vacuum readings recorded in the first quarter from the extraction wells located within Type B and C grids are presented in Table 3-3.

Areas that were not monitored due to landfill operation are shown on Figure 1.

EMCON/OWT Solid Waste Services

Wind speed and direction were measured using a Climatronics portable meteorological station mounted on the roof of the main office building at the landfill described in Section 7, Field Instrumentation and Equipment Specifications. Measurements were recorded on a continuous strip chart recorder. The wind speed and direction monitor was erected in the central portion of the site away from canyon walls and obstructions at an approximate elevation of 1,300 feet above mean sea level.

4.2 Instantaneous Surface Emission Monitoring Results

Monitoring measurements obtained during the month of January exceeded 500 ppm as methane in Grids 111, 112, 113, 127, and 131. Monitoring measurements in February exceeded 500 ppm as methane in Grids 4, 5, 20, 93, and 106. Monitoring measurements in March exceeded 500 ppm as methane in Grids 48, 58, 59, 61, 64, 85, 96, 99, 108, 110, 112, 113, 116, 117, 118, 126, 131, and 132. Grids with surface emissions exceeding 500 ppm are shown in Table 4-1. All other grids were below 500 ppm TOC as methane.

Recorded concentrations of TOC as methane in the grids ranged from 0.0 to 100,000 ppm above background. In accordance with SCAQMD Rule 1150.1 regarding detecting TOC as methane concentrations exceeding 500 ppmv, each of these grids were re-sampled within 10 calendar days of the original detection. Remonitored concentrations in these grids all measured below 500 ppmv. Remonitoring results are shown in Table 4-1. Figures 1, 2, and 3 show grids where surface emissions exceeded 500 ppm TOC as methane during instantaneous monitoring. During the period of instantaneous monitoring, the wind speed average was below 5 miles per hour and the instantaneous wind speed was below 10 miles per hour.

Table 4-1
Instantaneous Emission Monitoring Results
Bradley Landfill & Recycling Center, Sun Valley, CA

INSTRUMENT: OVA 128/88

SAMPLING PERIOD: 1ST QUARTER 2005
 TECHNICIAN: RES

| LOCATION OF LEAK | LEAK CONCENTRATION (ppmv) | DATE OF DISCOVERY | ACTION TAKEN TO REPAIR LEAK | DATE OF REPAIR | DATE OF ANY REQUIRED RE- MONITORING | RE-MONITORED CONCENTRATION (ppmv) |
|------------------|---------------------------------|----------------------|------------------------------------------------------------|-------------------|-------------------------------------------|-----------------------------------------|
| Grid 111 | 5,000 | 1/19/2005 | Repaired Surface | 1/19/2005 | 1/27/2005 | 200 |
| Grid 112 | 100,000 | 1/19/2005 | Repaired Well | 1/19/2005 | 1/27/2005 | 5 |
| Grid 113 | 5,000 | 1/19/2005 | Repaired Well | 1/19/2005 | 1/27/2005 | 5 |
| Grid 127 | 1,000 | 1/19/2005 | Repaired Well | 1/19/2005 | 1/27/2005 | 5 |
| Grid 131 | 500 | 1/19/2005 | Repaired Well | 1/19/2005 | 1/27/2005 | 5 |
| Grid 4 | 100,000 | 2/23/2005 | Tuned well No. 43 | 2/23/2005 | 3/2/2005 | 5 |
| Grid 5 | 1,000 | 2/23/2005 | Tuned well No. 87 | 2/23/2005 | 3/2/2005 | 5 |
| Grid 20 | 1,000 | 2/23/2005 | Tuned well No. EW-30 | 2/23/2005 | 3/2/2005 | 5 |
| Grid 93 | 5,000 | 2/23/2005 | Tuned well No. 205 | 2/23/2005 | 3/2/2005 | 5 |
| Grid 106 | 1,000 | 2/23/2005 | Fixed pipe and tuned well | 2/23/2005 | 3/2/2005 | 5 |
| Grid 48 | 1,000 | 3/22/2005 | Repaired surface and tuned Well 69 | 3/29/2005 | 3/30/2005 | 5 |
| Grid 58 | 1,000 | 3/22/2005 | Repaired surface and tuned Well EW-46 | 3/29/2005 | 3/30/2005 | 5 |
| Grid 59 | 1,000 | 3/22/2005 | Repaired surface and tuned Well 201 and P49 | 3/29/2005 | 3/30/2005 | 5 |
| Grid 61 | 10,000 | 3/22/2005 | Repaired Slope Surface | 3/29/2005 | 4/1/2005 | 5 |
| Grid 64 | 100,000 | 3/22/2005 | Repaired surface and tuned Sump 13 | 3/29/2005 | 3/30/2005 | 5 |
| Grid 85 | 10,000 | 3/22/2005 | Repaired well P34 and repaired surface slope below well | 3/29/2005 | 4/1/2005 | 5 |

Table 4-1
Instantaneous Emission Monitoring Results
Bradley Landfill & Recycling Center, Sun Valley, CA

INSTRUMENT: OVA 128/88

SAMPLING PERIOD: 1ST QUARTER 2005
 TECHNICIAN: RES

| LOCATION OF LEAK | LEAK CONCENTRATION (ppmv) | DATE OF DISCOVERY | ACTION TAKEN TO REPAIR LEAK | DATE OF REPAIR | DATE OF ANY REQUIRED RE- MONITORING | RE-MONITORED CONCENTRATION (ppmv) |
|------------------|---------------------------------|----------------------|----------------------------------------------------------|-------------------|-------------------------------------------|-----------------------------------------|
| Grid 96 | 5,000 | 3/22/2005 | Repaired surface and tuned Well 33 and EW-59 | 3/29/2005 | 3/30/2005 | 5 |
| Grid 99 | 1,000 | 3/22/2005 | Repaired surface and tuned well EW-88 | 3/29/2005 | 3/30/2005 | 5 |
| Grid 108 | 1,000 | 3/22/2005 | Repaired area next to well P-19 and slope | 3/29/2005 | 3/30/2005 | 5 |
| Grid 110 | 1,000 | 3/22/2005 | Repaired surface and tuned well EW-87 | 3/29/2005 | 3/30/2005 | 5 |
| Grid 112 | 10,000 | 3/22/2005 | Repaired surface slope and tuned Well P20 and Sump 11 | 3/29/2005 | 3/30/2005 | 5 |
| Grid 113 | 1,000 | 3/22/2005 | Repaired surface slope and tuned Well P-21 | 3/29/2005 | 3/30/2005 | 5 |
| Grid 116 | 1,000 | 3/22/2005 | Repaired surface and tuned Well EW-81 | 3/29/2005 | 3/30/2005 | 5 |
| Grid 117 | 10,000 | 3/22/2005 | Repaired surface and tuned Well P-66 | 3/29/2005 | 3/30/2005 | 5 |
| Grid 118 | 1,000 | 3/22/2005 | Repaired surface and tuned Well P-36 | 3/29/2005 | 3/30/2005 | 5 |
| Grid 126 | 5,000 | 3/22/2005 | Repaired surface and tuned Well P-26 | 3/29/2005 | 3/30/2005 | 5 |
| Grid 131 | 100,000 | 3/22/2005 | Repaired surface and tuned Sump F | 3/29/2005 | 3/30/2005 | 5 |
| Grid 132 | 100,000 | 3/22/2005 | Repaired surface and tuned Well P27 | 3/29/2005 | 3/30/2005 | 5 |

COMMENTS: Any component leak that meets or exceeds the 500 ppmv Methane limit must be repaired within 10 days.

5 LANDFILL GAS SAMPLING §1150.1(e)(4)

5.1 Landfill Gas Characterization Protocol

Due to the gas compressor being shutdown since December 30, 2004, LFG samples were only collected from the three (3) LFG flares. A total of three LFG samples were collected from flares on February 17, 2005. A portable pump was used to draw the LFG sample into a 10-liter Tedlar Bag enclosed in a light sealed box. The LFG sample was collected over a continuous ten-minute period.

5.2 Landfill Gas Sample Laboratory Results

Samples BL-001 (Flare #3), BL-002 (Flare #1), and BL-003 (Flare #2) were taken to AtmAA, Inc. on February 17, 2005. The gas samples were analyzed for toxic air contaminants, TGNMOs, fixed gases, and hydrogen sulfide. Table 5-2, Landfill Gas Sample Laboratory Summary, gives the laboratory methods and results for these constituents. Appendix E, Landfill Gas Sampling includes the laboratory report prepared by AtmAA, Inc.

Samples BL-001, BL-002, and BL-003 contained detectable concentrations of one or more of the following compounds: benzene, chlorobenzene, 1,1-dichloroethane, 1,1-dichloroethylene, dichloromethane, dichlorobenzenes, 1,2-dichloroethane, trichloroethene, perchloroethylene, toluene, 1,1,1-trichloroethane, vinyl chloride, and total xylenes. Laboratory results for samples collected from the gas plant and each flare are presented in Appendix E.

5.3 SCAQMD Rule 431.1 Sulfur Monitoring

A new Landfill Gas Treating System Permit to Operate No. F71948 (A/N 435883) issued in December 2004 removed a condition that required daily hydrogen sulfide monitoring of the gas compressor. Sulfur content of the landfill gas leaving the facility was not monitored this quarter due to the compressor being shutdown since December 30, 2004. See Table 5-3 for Quarterly H₂S Monitoring Results.

| Table 5-1 - Landfill Gas Summary of Results | | | |
|---------------------------------------------|---------------------|---------------------|---------------------|
| Components | Flare 1 (BL-002) | Flare 2 (BL-003) | Flare 3 (BL-001) |
| TGNMO (ppmv) | 5,720 | 1,900 | 3,140 |
| Hydrogen Sulfide (ppmv) | 44.7 | 38.4 | 12.2 |
| Methane (%) | 46.0 | 29.9 | 27.7 |

Table 5-2
Landfill Gas Sample - Laboratory Summary
Bradley Landfill & Recycling Center (BLRC)
February 17, 2005

| SCAQMD Rule 1150.1 Components Analysis in Integrated Surface Tedlar Bag Samples | | | | | |
|---------------------------------------------------------------------------------|---------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| Compound | Gas Plant (ppbV) | Flare #1 BL-002 (ppbV) | Flare #2 BL-003 (ppbV) | Flare #3 BL-001 (ppbV) | Reporting Limit (ppbV) |
| Benzene | Shutdown | 4,120 | 1,270 | 8,770 | 20 |
| Benzyl Chloride | | <40 | <40 | <40 | 40 |
| Carbon Tetrachloride | | <30 | <30 | <30 | 30 |
| Chlorobenzene | | 162 | 216 | 80.4 | 30 |
| Chloroform | | <20 | <20 | <20 | 20 |
| 1,1-Dichloroethane | | 282 | 69.9 | 136 | 20 |
| 1,1-Dichloroethylene | | 79.1 | <40 | 41.8 | 40 |
| Dichloromethane | | 845 | <30 | 187 | 30 |
| 1,2-Dibromoethane | | <30 | <30 | <30 | 30 |
| Dichlorobenzenes ⁽¹⁾ | | 551 | 457 | <30 | 30 |
| 1,2-Dichloroethane | | 82.2 | 23.1 | 35.8 | 20 |
| Trichloroethene | | 737 | 142 | 250 | 20 |
| Perchloroethylene | | 1,670 | 386 | 476 | 20 |
| Toluene | | 32,800 | 4,970 | 12,000 | 20 |
| 1,1,1-trichloroethane | | <20 | <20 | <20 | 20 |
| Total Xylenes* | | 14,550 | 7,480 | 3,417 | 20 |
| Vinyl Chloride | | 171 | 626 | 371 | 20 |
| Compound | (ppmV) | (ppmV) | (ppmV) | (ppmV) | (ppmV) |
| Total Non-Methane Organics (as Methane) | Shutdown | 5,720 | 1,900 | 3,140 | 20 |
| Hydrogen sulfide | | 44.7 | 38.4 | 12.2 | 0.5 |
| Carbonyl sulfide | | 0.37 | <0.08 | 0.24 | 0.08 |
| Methyl mercaptan | | 3.59 | 0.45 | 2.25 | 0.06 |
| Ethyl mercaptan | | 0.18 | 0.22 | <0.1 | 0.1 |
| Dimethyl sulfide | | 7.27 | 0.46 | 7.66 | 0.1 |
| Carbon disulfide | | 0.10 | 0.092 | 0.065 | 0.09 |
| Isopropyl mercaptan | | 0.30 | <0.06 | 0.064 | 0.06 |
| n-propyl mercaptan | | <0.06 | <0.06 | <0.06 | 0.06 |
| Dimethyl disulfide | | 0.36 | 0.12 | 0.38 | 0.06 |
| Total reduced sulfur | | 57.3 | 40.0 | 23.3 | 0.5 |
| BTU / ft.3 | | 469 | 304 | 282 | 1 |

Table 5-2 (Continued)
Landfill Gas Sample - Laboratory Summary
Bradley Landfill & Recycling Center (BLRC)
February 17, 2005

| SCAQMD Rule 1150.1 Components Analysis in Integrated Surface Tedlar Bag Samples | | | | | |
|---------------------------------------------------------------------------------|--------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Compound | Gas Plant (%,V) | Flare #1 BL-002 (%,V) | Flare #2 BL-003 (%,V) | Flare #3 BL-001 (%,V) | Reporting Limit (%,V) |
| Nitrogen | Shutdown | 12.4 | 37.8 | 39.4 | 0.1 |
| Oxygen | | 1.20 | 2.38 | 5.29 | 0.1 |
| Methane | | 46.0 | 29.9 | 27.7 | 0.1 |
| Carbon dioxide | | 37.8 | 27.6 | 25.4 | 0.1 |

ND: Not detected.

*Total xylenes reported includes the sum of the detected concentrations of m-& p-xylenes and o-xylenes.

** = Coeluting Compounds

The reported oxygen concentration includes any argon present in the sample. Calibration is based on a standard atmosphere containing 20.95% oxygen and 0.93% argon.

(1) Total amount containing meta, para, and ortho isomers.

Table 5-3
Quarterly H₂S Monitoring Results

Bradley Landfill, Sun Valley, California

| DATE | TIME | TEMP °F | PLANT GAS SALES | FLARE 1 | FLARE 2 | FLARE 3 |
|-----------|-------------------------|------------|--------------------|---------------------------------------------------------------------|------------|------------|
| 1/1/2005 | | | | H ₂ S samples are taken monthly for laboratory analyses. | | |
| 1/2/2005 | | | | | | |
| 1/3/2005 | | | | | | |
| 1/4/2005 | | | | | | |
| 1/5/2005 | | | | | | |
| 1/6/2005 | | | | | | |
| 1/7/2005 | | | | | | |
| 1/8/2005 | | | | | | |
| 1/9/2005 | | | | | | |
| 1/10/2005 | | | | | | |
| 1/11/2005 | | | | | | |
| 1/12/2005 | | | | | | |
| 1/13/2005 | | | | | | |
| 1/14/2005 | | | | | | |
| 1/15/2005 | | | | | | |
| 1/16/2005 | | | | | | |
| 1/17/2005 | | | | | | |
| 1/18/2005 | | | | | | |
| 1/19/2005 | | | | | | |
| 1/20/2005 | | | | | | |
| 1/21/2005 | Gas Compressor shutdown | | | 38.8 | 31.8 | 8.76 |
| 1/22/2005 | | | | H ₂ S samples are taken monthly for laboratory analyses. | | |
| 1/23/2005 | | | | | | |
| 1/24/2005 | | | | | | |
| 1/25/2005 | | | | | | |
| 1/26/2005 | | | | | | |
| 1/27/2005 | | | | | | |
| 1/28/2005 | | | | | | |
| 1/29/2005 | | | | | | |
| 1/30/2005 | | | | | | |
| 1/31/2005 | | | | | | |
| 2/1/2005 | | | | | | |
| 2/2/2005 | | | | | | |
| 2/3/2005 | | | | | | |
| 2/4/2005 | | | | | | |
| 2/5/2005 | | | | | | |
| 2/6/2005 | | | | | | |
| 2/7/2005 | | | | | | |
| 2/8/2005 | | | | | | |

Table 5-3
Quarterly H₂S Monitoring Results

Bradley Landfill, Sun Valley, California

| DATE | TIME | TEMP °F | PLANT GAS SALES | FLARE 1 | FLARE 2 | FLARE 3 |
|-----------|-------------------------|------------|--------------------|---------------------------------------------------------------------|------------|------------|
| 2/9/2005 | | | | H ₂ S samples are taken monthly for laboratory analyses. | | |
| 2/10/2005 | | | | | | |
| 2/11/2005 | | | | | | |
| 2/12/2005 | | | | | | |
| 2/13/2005 | | | | | | |
| 2/14/2005 | | | | | | |
| 2/15/2005 | | | | | | |
| 2/16/2005 | | | | | | |
| 2/17/2005 | Gas Compressor Shutdown | | | 44.7 | 38.4 | 12.2 |
| 2/18/2005 | | | | H ₂ S samples are taken monthly for laboratory analyses. | | |
| 2/19/2005 | | | | | | |
| 2/20/2005 | | | | | | |
| 2/21/2005 | | | | | | |
| 2/22/2005 | | | | | | |
| 2/23/2005 | | | | | | |
| 2/24/2005 | | | | | | |
| 2/25/2005 | | | | | | |
| 2/26/2005 | | | | | | |
| 2/27/2005 | | | | | | |
| 2/28/2005 | | | | | | |
| 3/1/2005 | | | | | | |
| 3/2/2005 | | | | | | |
| 3/3/2005 | | | | | | |
| 3/4/2005 | | | | | | |
| 3/5/2005 | | | | | | |
| 3/6/2005 | | | | | | |
| 3/7/2005 | | | | | | |
| 3/8/2005 | | | | | | |
| 3/9/2005 | | | | | | |
| 3/10/2005 | | | | | | |
| 3/11/2005 | | | | | | |
| 3/12/2005 | | | | | | |
| 3/13/2005 | | | | | | |
| 3/14/2005 | | | | | | |
| 3/15/2005 | | | | | | |
| 3/16/2005 | | | | | | |
| 3/17/2005 | | | | | | |
| 3/18/2005 | 10:45 | 69 | Shutdown | 38.6 | 34.8 | 18.0 |

Table 5-3
Quarterly H₂S Monitoring Results
Bradley Landfill, Sun Valley, California

| DATE | TIME | TEMP °F | PLANT GAS SALES | FLARE 1 | FLARE 2 | FLARE 3 |
|-----------|------|------------|--------------------|---------------------------------------------------------------------|------------|------------|
| 3/19/2005 | | | | H ₂ S samples are taken monthly for laboratory analyses. | | |
| 3/20/2005 | | | | | | |
| 3/21/2005 | | | | | | |
| 3/22/2005 | | | | | | |
| 3/23/2005 | | | | | | |
| 3/24/2005 | | | | | | |
| 3/25/2005 | | | | | | |
| 3/26/2005 | | | | | | |
| 3/27/2005 | | | | | | |
| 3/28/2005 | | | | | | |
| 3/29/2005 | | | | | | |
| 3/30/2005 | | | | | | |
| 3/31/2005 | | | | | | |

Notes:

Gas Compressor shutdown during the First Quarter 2005 due to repairs at the Penrose Landfill Gas Conversion, LLC

H₂S Sample readings are no longer taken daily at the compressor and flaring system.

Analyses taken using a 10 liter bag sample and analyzed by AtmAA Inc. Laboratory

6 AMBIENT AIR SAMPLING§1150.1(e)(5)

6.1 Ambient Air Sampling Protocol

First quarter 2005 ambient air sampling was performed on February 26 and 27, 2005. Sampling was performed consistent with SCAQMD Rule 1150.1, Attachment A.

Four ambient air samplers were used to collect upwind (south) and downwind (north) samples. Two ambient air samplers were placed upwind at the landfill property boundary and two downwind at the landfill property boundary. Figure 1, Surface Emissions Monitoring Site Plan, shows the ambient air sample locations.

The ambient air sampling program was designed in accordance with the Guidelines for Implementation of Rule 1150.1 and the compliance plan requirements issued by the SCAQMD. All procedures and equipment used in the program are consistent with guideline specifications.

The Landfill compliance plan requires the collection of four (4) 12-hour samples located at the landfill perimeter. These 12-hour samples are representative of the predominant upslope and down slope wind flow patterns (two per location) during each 12-hour time periods. These locations were selected based upon evaluation of current and historic wind monitoring data collected on site. Sampling stations are positioned to provide good meteorological exposure to the predominant upslope flows and anticipated nighttime local air drainage patterns typically encountered at this site.

Ambient air samplers used at the landfill were constructed, installed, and operated to meet SCAQMD design criteria and performance specifications published in the Rule 1150.1 guidelines. Light-sealed boxes containing individual 10-liter Tedlar sample bags were housed within each sampling station enclosure. Analyses were performed within 72 hours after sampling was concluded

A Climatronics portable wind speed and direction station connected to a continuous recorder was used to record wind speed and direction for the entire duration of integrated sampling. Section 7, Field Instrumentation and Equipment Specifications, describes both the ambient air sampler assembly and the wind station in greater detail. Tedlar bags used for collecting the 24-hour integrated samples were purged three times with nitrogen and tested for leaks prior to usage. Appendix G, Tedlar Bag Quality Assurance and Control,

includes a Tedlar bag checklist that summarizes the pertinent data regarding this procedure

The four samples were analyzed for toxic air contaminants, methane, and TGNMOs by AtmAA, Inc. The technicians responsible for transporting the integrated samples recorded pertinent information on a Chain-of-Custody form included in Appendix F, Ambient Air Sampling. Additional personnel receiving the integrated samples recorded their signatures on the Chain-of-Custody form.

Ambient air samples were collected when the average wind speed was five miles per hour or less, and the instantaneous wind speed was less than fifteen miles per hour. The samples were not collected within 72 hours of a rainstorm. Wind speed and direction charts are included in Appendix F.

6.2 Ambient Air Laboratory Results

Upwind ambient air samples (AA-1, AA-4) and downwind ambient air samples (AA-2, AA-3) were sent to AtmAA, Inc. on February 28, 2005 for analysis. Table 6-1, Ambient Air Samples Laboratory Summary, summarizes the laboratory methods and results.

Upwind Samples

Laboratory analysis of sample AA-1 (Lab Sample 00595-11) detected a TGNMO concentration of 1.57 ppmv. The methane concentration was 3.32 ppmv, benzene concentration was 0.47 ppmv, dichloromethane concentration was 0.34, carbon tetrachloride concentration was 0.12 ppmv, toluene concentration was 1.94 ppmv, and total xylenes concentration was 3.05 ppmv.

Laboratory analysis of sample AA-4 (Lab Sample 00595-14) detected a TGNMO concentration of 1.66 ppmv. The methane concentration was 3.06 ppmv, benzene concentration was 0.38 ppmv, dichloromethane concentration was 0.35, carbon tetrachloride concentration was 0.12 ppmv, toluene concentration was 1.38 ppmv, and total xylenes concentration was 1.20 ppmv.

Downwind Samples

Laboratory analysis of sample AA-2 (Lab Sample 00595-12) detected a TGNMO concentration of 1.68 ppmv. The methane concentration was 2.18 ppmv, benzene concentration was 0.50 ppmv, dichloromethane concentration was 0.40, carbon tetrachloride concentration was 0.12 ppmv, toluene concentration was 1.43 ppmv, and total xylenes concentration was 1.56 ppmv.

Laboratory analysis of sample AA-3 (Lab Sample 00595-13) detected a TGNMO concentration of 1.75 ppmv. The methane concentration was 19.8 ppmv, benzene concentration was 0.38 ppmv, carbon tetrachloride concentration was 0.11 ppmv, toluene concentration was 1.17 ppmv, and total xylenes concentration was 1.20 ppmv.

Table 6-1
Ambient Air Sampling Laboratory Summary
Bradley Landfill & Recycling Center (BLRC)
February 28, 2005

| SCAQMD Rule 1150.1 Components Analysis in Ambient Air Tedlar Bag Samples | | | |
|--------------------------------------------------------------------------|----------------------------------------------|----------------------------------------------|---------------------------|
| Compound | Sample Ambient Air AA-1 Results (ppbV) | Sample Ambient Air AA-2 Results (ppbV) | Reporting Limit (ppbV) |
| Hydrogen Sulfide | <50 | <50 | 50 |
| Benzene | 0.47 | 0.50 | 0.1 |
| Benzyl Chloride | <0.4 | <0.4 | 0.4 |
| Carbon Tetrachloride | 0.12 | 0.12 | 0.1 |
| Chlorobenzene | <0.1 | <0.1 | 0.1 |
| Chloroform | <0.1 | <0.1 | 0.1 |
| 1,1-Dichloroethane | <0.1 | <0.1 | 0.1 |
| 1,1-Dichloroethylene | <0.1 | <0.1 | 0.1 |
| 1,2-Dibromoethane | <0.1 | <0.1 | 0.1 |
| Dichlorobenzene ⁽¹⁾ | <1.1 | <1.1 | 1.1 |
| Dichloromethane | 0.34 | 0.40 | 0.1 |
| 1,2-Dichloroethane | <0.1 | <0.1 | 0.1 |
| 1,1,1-Trichloroethane | 0.43 | <0.1 | 0.1 |
| Perchloroethene | <0.1 | <0.1 | 0.1 |
| Toluene | 1.94 | 1.43 | 0.1 |
| Total Xylenes* | 3.05 | 1.56 | 0.3 |
| Trichloroethene | <0.1 | <0.1 | 0.1 |
| Vinyl Chloride | <0.1 | <0.1 | 0.1 |
| SCAQMD Rule 1150.1 Components Analysis in Ambient Air Tedlar Bag Samples | | | |
| Compound | Sample Ambient Air AA-1 Results (ppbV) | Sample Ambient Air AA-2 Results (ppbV) | Reporting Limit (ppmV) |
| Methane | 3.32 | 2.18 | 1 |
| Total Non-Methane Organics (as methane) | 1.57 | 1.68 | 1 |

Table 6-1 (Continued)
Ambient Air Sampling Laboratory Summary
 Bradley Landfill & Recycling Center (BLRC)
 February 28, 2005

| SCAQMD Rule 1150.1 Components Analysis in Ambient Air Tedlar Bag Samples | | | |
|--------------------------------------------------------------------------|----------------------------------------------|----------------------------------------------|---------------------------|
| Compound | Sample Ambient Air AA-3 Results (ppbV) | Sample Ambient Air AA-4 Results (ppbV) | Reporting Limit (ppbV) |
| Hydrogen Sulfide | <50 | <50 | 50 |
| Benzene | 0.38 | 0.38 | 0.1 |
| Benzyl Chloride | <0.4 | <0.4 | 0.4 |
| Carbon Tetrachloride | 0.11 | 0.12 | 0.1 |
| Chlorobenzene | <0.1 | <0.1 | 0.1 |
| Chloroform | <0.1 | <0.1 | 0.1 |
| 1,1-Dichloroethane | <0.1 | <0.1 | 0.1 |
| 1,1-Dichloroethylene | <0.1 | <0.1 | 0.1 |
| 1,2-Dibromoethane | <0.1 | <0.1 | 0.1 |
| Dichlorobenzene ⁽¹⁾ | <1.1 | <1.1 | 1.1 |
| Dichloromethane | 0.40 | 0.35 | 0.1 |
| 1,2-Dichloroethane | <0.1 | <0.1 | 0.1 |
| 1,1,1-Trichloroethane | <0.1 | <0.1 | 0.1 |
| Perchloroethene | 1.30 | <0.1 | 0.1 |
| Toluene | 1.17 | 1.38 | 0.1 |
| Total Xylenes* | 1.20 | 1.20 | 0.3 |
| Trichloroethene | <0.1 | <0.1 | 0.1 |
| Vinyl Chloride | <0.1 | <0.1 | 0.1 |
| SCAQMD Rule 1150.1 Components Analysis in Ambient Air Tedlar Bag Samples | | | |
| Compound | Sample Ambient Air AA-3 Results (ppbV) | Sample Ambient Air AA-4 Results (ppbV) | Reporting Limit (ppbV) |
| Methane | 19.8 | 3.06 | 1 |
| Total Non-Methane Organics (as methane) | 1.75 | 1.66 | 1 |

7 FIELD INSTRUMENTATION AND EQUIPMENT SPECIFICATIONS

7.1 Meteorological Station

A Climatronics portable meteorological station is used for measuring wind speed and direction during instantaneous and integrated surface sampling, and ambient air monitoring. This monitor collects continuous wind data during all monitoring events. The wind system consists of a Climatronics monitor, equipped with F460 wind sensors with threshold speeds of 0.50 miles per hour and a portable dual channel recording strip chart.

A continuous recorder and battery is housed in a portable steel case to prevent damage to the system. The continuous recorder averages wind speed and direction measurements in 15-minute increments. Measurements are recorded on a strip chart. The date, time, and wind speed and direction measurements are recorded daily after each instantaneous or integrated sampling session is completed.

A supervisor monitored the wind speed during instantaneous and integrated sampling sessions so that technicians are continuously aware of the wind speed when walking traverses or grid patterns.

7.2 Organic Vapor Analyzer

A portable Organic Vapor Analyzer (OVA) manufactured by Foxboro was used for monitoring the surface emission concentration of total organic compounds (TOCs) during instantaneous monitoring, and for measuring TOC concentrations in integrated surface samples and perimeter probes (ppm range). The OVA used had the following specifications:

- Range: 0-10,000 ppm (v/v)
- Minimum detectable limit: 5 ppm
- Response time: 15 seconds
- Flame out indicator: audible and visual
- Accuracy: +/-4%
- Precision: +/-3%

- Ambient temperature: 0-50 degrees Celsius

7.3 GEM-500 Gas Extraction Monitor

A GEM-500 Gas Extraction Monitor, manufactured by LANDTEC for use at landfills, was used for monitoring LFG composition. Compounds measured include methane, carbon dioxide, oxygen, and balance gas as nitrogen in percent volume and methane as percent of LEL.

The GEM-500 specifications are as follows:

| | Sensor Range Imperial | Resolution Imperial |
|------------------------------------|--------------------------|------------------------|
| Methane - CH ₄ : | 0-100% | 0.1% |
| Carbon dioxide - CO ₂ : | 0-75% | 0.1% |
| Oxygen - O ₂ : | 0-100% | 0.1% |
| Pressure (differential): | 0-10" w.c. | 0.01" w.c. |
| (static): | 0-100" w.c. | 0.1" w.c. |

GEM-500 typical accuracy:

| Concentration | %CH ₄ by Volume | %CO ₂ by Volume | %O ₂ by Volume |
|---------------|----------------------------|----------------------------|---------------------------|
| 5% LEL | +/- 0.3% | N/A | +/- .25% |
| 75% | +/- 1.9% | +/- 3.0% | N/A |
| 100% | +/- 1.95% | N/A | N/A |

7.4 GEM-2000 Gas Extraction Monitor

A GEM-2000 Gas Extraction Monitor, manufactured by LANDTEC for use at landfills, was used for monitoring LFG composition. Compounds measured include methane, carbon dioxide, oxygen, and balance gas as nitrogen in percent volume and methane as percent of LEL.

The GEM-2000 specifications are as follows:

| | Sensor Range Imperial | Resolution Imperial |
|------------------------------------|--------------------------|------------------------|
| Methane - CH ₄ : | 0-100% | 0.1% |
| Carbon dioxide - CO ₂ : | 0-100% | 0.1% |
| Oxygen - O ₂ : | 0-25% | 0.1% |
| Pressure (differential): | 0-10" w.c. | 0.01" w.c. |
| (static): | 0-100" w.c. | 0.1" w.c. |

GEM-2000 typical accuracy:

| Concentration | %CH ₄ by Volume | %CO ₂ by Volume | %O ₂ by Volume |
|---------------|----------------------------|----------------------------|---------------------------|
| 0-5% | +/- 0.5% | +/- 0.5% | +/- .25% |
| 5-15% | +/- 1% | +/- 1% | N/A |
| 15%-FS | +/- 3% | N/A | N/A |

7.5 Integrated Surface Sampler

Each portable Integrated Sampler is comprised of a Tedlar bag, DC pump, and a calibrated flow controller. Each bag sampler is calibrated by a film (bubble meter) calibration method. Each Tedlar bag sample was purged three times with ultra-pure nitrogen before sampling and enclosed in a light-sealed box after sampling. Analyses were performed within 72 hours after sampling was conducted.

7.6 Tedlar Bags

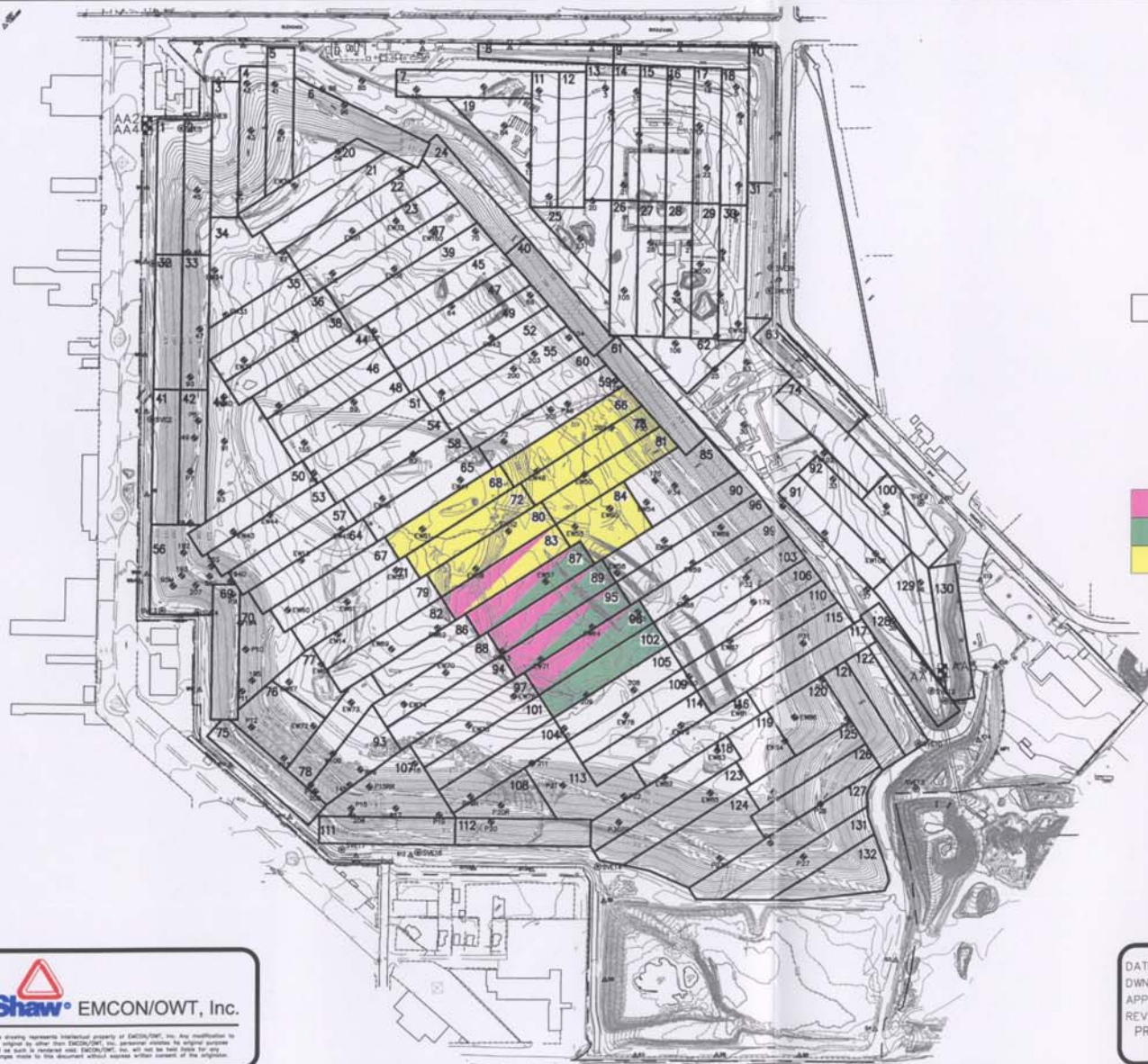
Ten-liter bags, made of Tedlar material, were used to collect integrated samples, and for the collection of the raw gas sample at the main gas conveyance line. Each Tedlar bag, prior to use, is filled with nitrogen for a minimum of 24 hours and checked for leaks. Each used Tedlar bag is purged three times with nitrogen and refilled with nitrogen for a minimum of 24 hours and checked for leaks. Each Tedlar bag is numbered for tracking purposes and each number corresponds with the number of the integrated sampling grid.

LIMITATIONS

The services described in this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, nor the use of segregated portions of this report.

FIGURES



LEGEND

- 179 VAPOR EXTRACTION WELLS
- PROPERTY BOUNDARY
- SURFACE EMISSIONS MONITORING GRID
- TOTAL ORGANIC COMPOUNDS (TOC) MEASURED AS METHANE USING ORGANIC VAPOR ANALYZER
- AA1 UP WIND SAMPLER
- AA2 DOWN WIND SAMPLER
- AA3 DOWN WIND SAMPLER
- AA4 UP WIND SAMPLER
- ACTIVE FILL AREA 01/19/05
- ACTIVE FILL AREA 02/23/05
- ACTIVE FILL AREA 03/22/05

NOTES:

- 1) ALL TOTAL ORGANIC COMPOUND (TOC) CONCENTRATIONS ARE MEASURED IN PARTS PER MILLION (PPM) AS METHANE.
- 2) BACKGROUND TOC READING WAS 5 ppm.
- 3) BRADLEY WEATHER STATION IS LOCATED ATOP THE MAIN OFFICE BUILDING (NOT SHOWN ON MAP).
- 4) AA = AMBIENT AIR MONITORING STATION.

0 400 800
SCALE IN FEET

FIGURE 1

WASTE MANAGEMENT OF CALIFORNIA, INC.
BRADLEY LANDFILL AND RECYCLING CENTER
SUN VALLEY, CALIFORNIA
1st QUARTER 2005
SURFACE EMISSIONS MONITORING SITE PLAN

DATE 05/10/05
DWN JDT
APP DHT
REV
PROJECT NO.
108341

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1" 1/2" 0"

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LEGEND

- PROPERTY BOUNDARY
- 5 ppm INTEGRATED SURFACE SAMPLING GRID
- TOTAL ORGANIC COMPOUNDS (TOC) MEASURED AS METHANE USING ORGANIC VAPOR ANALYZER
- AA1 UP WIND SAMPLER
- AA2 DOWN WIND SAMPLER
- AA3 DOWN WIND SAMPLER
- AA4 UP WIND SAMPLER
- READINGS OVER 500 ppm JANUARY 2005
- ACTIVE AREA, JANUARY 2005

NOTES:

- 1) ALL TOTAL ORGANIC COMPOUND (TOC) CONCENTRATIONS ARE MEASURED IN PARTS PER MILLION (PPM) AS METHANE.
- 2) BACKGROUND TOC READING WAS 5 ppm.
- 3) BRADLEY WEATHER STATION IS LOCATED ATOP THE MAIN OFFICE BUILDING (NOT SHOWN ON MAP) .
- 4) AA = AMBIENT AIR MONITORING STATION.

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DATE 05/10/05
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PROJECT NO. 108341

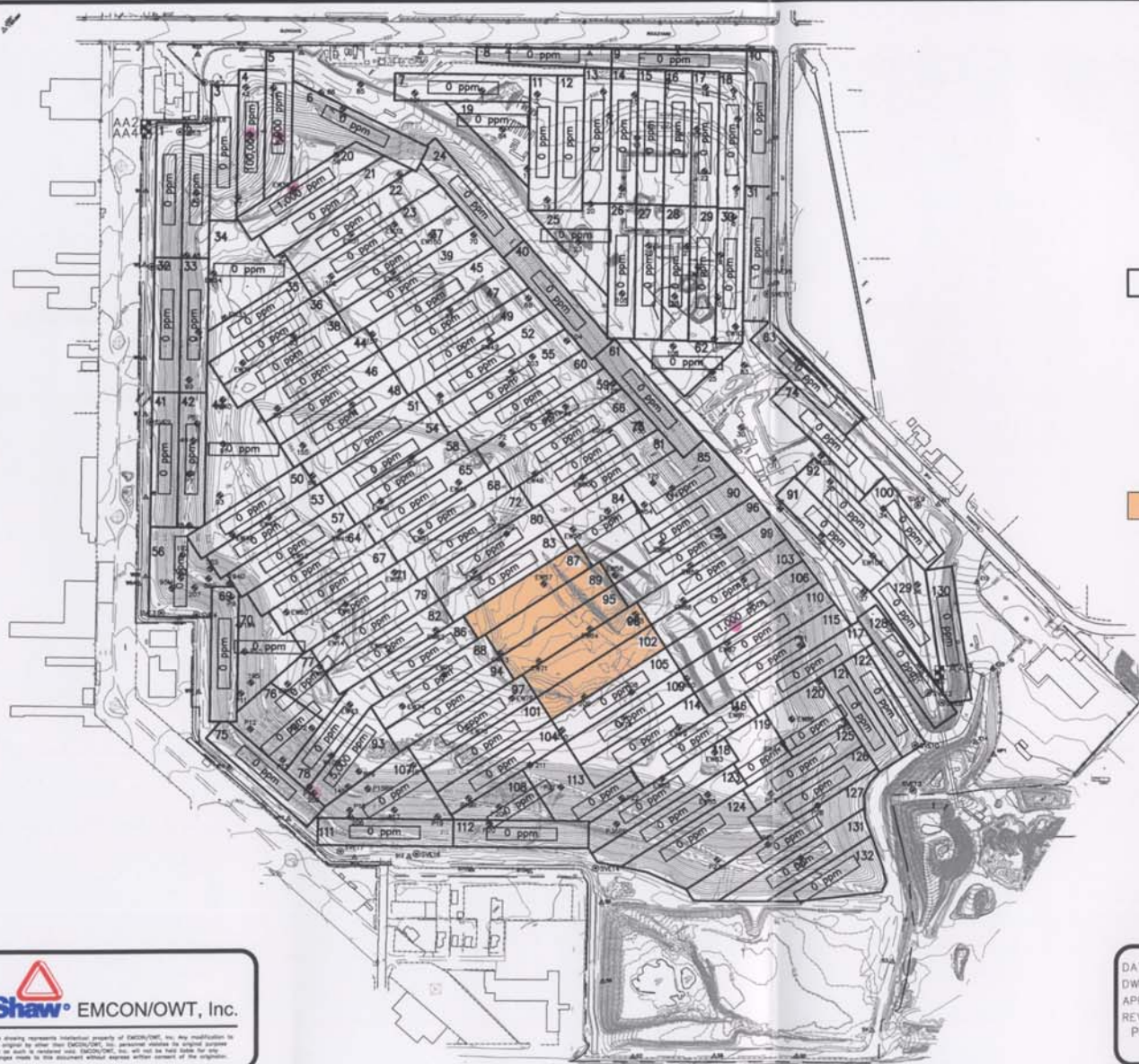
FIGURE 2A
WASTE MANAGEMENT OF CALIFORNIA, INC.
BRADLEY LANDFILL AND RECYCLING CENTER
SUN VALLEY, CALIFORNIA
JANUARY 2005 - 1st QUARTER 2005
INSTANTANEOUS SURFACE EMISSIONS RESULTS

1" 1/2" 0" 1"

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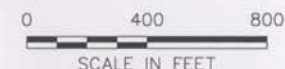


LEGEND

- PROPERTY BOUNDARY
- 5 ppm INTEGRATED SURFACE SAMPLING GRID
- TOTAL ORGANIC COMPOUNDS (TOC) MEASURED AS METHANE USING ORGANIC VAPOR ANALYZER
- AA1 UP WIND SAMPLER
- AA2 DOWN WIND SAMPLER
- AA3 DOWN WIND SAMPLER
- AA4 UP WIND SAMPLER
- READINGS OVER 500 ppm FEBRUARY 2005
- ACTIVE AREA, FEBRUARY 2005

NOTES:

- 1) ALL TOTAL ORGANIC COMPOUND (TOC) CONCENTRATIONS ARE MEASURED IN PARTS PER MILLION (PPM) AS METHANE.
- 2) BACKGROUND TOC READING WAS 5 ppm.
- 3) BRADLEY WEATHER STATION IS LOCATED ATOP THE MAIN OFFICE BUILDING (NOT SHOWN ON MAP).
- 4) AA = AMBIENT AIR MONITORING STATION.



DATE 05/10/05
DWN JDT
APP DHT
REV
PROJECT NO. 108341

FIGURE 2B
WASTE MANAGEMENT OF CALIFORNIA, INC.
BRADLEY LANDFILL AND RECYCLING CENTER
SUN VALLEY, CALIFORNIA
FEBRUARY 2005 - 1st QUARTER 2005
INSTANTANEOUS SURFACE EMISSIONS RESULTS

1" 1/2" 0"

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LEGEND

- PROPERTY BOUNDARY
- 5 ppm INTEGRATED SURFACE SAMPLING GRID
- TOTAL ORGANIC COMPOUNDS (TOC) MEASURED AS METHANE USING ORGANIC VAPOR ANALYZER
- AA1 UP WIND SAMPLER
- AA2 DOWN WIND SAMPLER
- AA3 DOWN WIND SAMPLER
- AA4 UP WIND SAMPLER
- READINGS OVER 500 ppm MARCH 2005
- ACTIVE AREA, MARCH 2005

NOTES:

- 1) ALL TOTAL ORGANIC COMPOUND (TOC) CONCENTRATIONS ARE MEASURED IN PARTS PER MILLION (PPM) AS METHANE.
- 2) BACKGROUND TOC READING WAS 5 ppm.
- 3) BRADLEY WEATHER STATION IS LOCATED ATOP THE MAIN OFFICE BUILDING (NOT SHOWN ON MAP).
- 4) AA = AMBIENT AIR MONITORING STATION.

0 400 800
SCALE IN FEET

DATE 05/10/05
OWN JDT
APP DHT
REV
PROJECT NO.
108341

FIGURE 2C
WASTE MANAGEMENT OF CALIFORNIA, INC.
BRADLEY LANDFILL AND RECYCLING CENTER
SUN VALLEY, CALIFORNIA
MARCH 2005 - 1st QUARTER 2005
INSTANTANEOUS SURFACE EMISSIONS RESULTS

APPENDIX A
ALTERNATIVE RULE 1150.1 COMPLIANCE PLAN



South Coast Air Quality Management District

21865 E. Copley Drive, Diamond Bar, CA 91765-4182
(909) 396-2000 • www.aqmd.gov

June 19, 2002

WASTE MANAGEMENT DISPOSAL SVCS OF CAL
9081 TUJUNGA AVE
SUN VALLEY, CA 91352

Attention: SCOTT PIGNAC

RULE 1150.1 COMPLIANCE PLAN

Reference is made to your Application for a Rule 1150.1 Compliance Plan for the following landfill.

| | | | |
|-------------------|------------------|-----------|----------------|
| Facility ID: | 50310 | Sector: | PC |
| Application No: | 394147 | Phone No: | (818) 767-6180 |
| Common Name: | Bradley Landfill | | |
| Location Address: | 9227 TUJUNGA AVE | | |
| City: | SUN VALLEY | , CA | 91352-1542 |

South Coast Air Quality Management District (AQMD) has reviewed your application and approved the alternatives as described in the inserts to the attached Rule 1150.1 requirements for your landfill. Rule 1150.1 Compliance Plans may be submitted by each owner or operator responsible for that section of the rule directly under their control, or by the owner or operator responsible for the entire landfill. Compliance under the alternative provision is achieved if only one owner or operator with responsibility submits a compliance plan for the applicable section of the rule. Only one alternative to each rule requirement shall be allowed for multiple Compliance Plans issued to one landfill, and that alternative shall be written into each Compliance Plan for that landfill. The AQMD reserves the right to deny any or all of these alternatives if it is determined that the alternative(s) allow emissions from the landfill that would not have occurred if the owner or operator were complying with the rule requirements. **This Compliance Plan supercedes all previous plans issued to you for this site. The Municipal Solid Waste (MSW) landfill owner or operator shall comply with this approved Compliance Plan no later than October 1, 2002.**

Where no Rule 1150.1 alternatives are specified, compliance with provisions of Rule 1150.1 is required. You are further advised that other governmental agencies may require approval for the operation of this landfill and it is the responsibility of the applicant to obtain approval from each agency. This compliance plan will remain in force until either a new plan is filed and approved or the applicant is notified by the Executive Officer of revisions to this plan. The AQMD shall not be responsible or liable for any losses resulting from measures required or taken pursuant to the requirements of this approved Rule 1150.1 Compliance Plan.

June 19, 2002

If you have any questions regarding this matter, please phone Ted Kowalczyk, Air Quality Engineer at (909) 396-2592.

Sincerely,



Jay Chen, P.E.

Senior A.Q. Engineering Manager

cc: Larry Israel
Air Quality Inspector
Revision Number: 3

Alternative Compliance Plan For Bradley Landfill, Issue No. 3

**RULE 1150.1. CONTROL OF GASEOUS EMISSIONS FROM MUNICIPAL
SOLID WASTE LANDFILLS (Amended March 17, 2000)**

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**The reference numbers in the left hand margin of the rule refer to sections of
40 CFR, Part 60, Subpart WWW (NSPS)**

(a) Purpose

The rule is intended to limit Municipal Solid Waste (MSW) landfill emissions to prevent public nuisance and possible detriment to public health caused by exposure to such emissions.

(b) Applicability

This rule applies to each active and inactive MSW landfill.

(c) Definitions

Terms used but not defined in this rule have the meaning given them in 40 CFR, Part 60, Section 60.751 (Definitions):

- (1) **ADMINISTRATOR** means the Executive Officer of the South Coast Air Quality Management District (District).
- (2) **ACTIVE LANDFILL** means an MSW landfill that has received waste on or after November 8, 1987.
- (3) **BACKGROUND** means the local ambient concentration of total organic compounds (TOC) measured as methane determined by holding the instrument probe approximately 5 to 6 feet above the landfill surface.
- (4) **CLOSED LANDFILL** means a disposal facility that has ceased accepting waste and was closed in accordance with all applicable federal, state and local statutes, regulations, and ordinances in effect at the time of closure.
- (5) **INACTIVE LANDFILL** means an MSW landfill where solid waste had been disposed of before November 8, 1987 and no more subsequent solid waste disposal activity has been conducted within the disposal facility.
- (6) **MSW LANDFILL** means an entire disposal facility in a contiguous geographical space where solid waste is placed in or on land. An MSW landfill may be either active or inactive.
- (7) **OPERATOR** means the person:
 - (A) Operating the MSW landfill, or
 - (B) Operating the MSW landfill gas collection or control system.
- (8) **OWNER** means the person holding Title to the property.
- (9) **PERIMETER** means the outer boundary of the entire waste disposal property.
- (10) **PROFESSIONAL ENGINEER** means an engineer holding a valid certificate issued by the State of California Board of Registration for

Professional Engineers and Land Surveyors or a state offering reciprocity with California.

- (11) TOXIC AIR CONTAMINANT (TAC) means an air contaminant which has been identified as a hazardous air pollutant pursuant to Section 7412 of Title 42 of the United States Code; or has been identified as a TAC by the Air Resources Board pursuant to Health and Safety Code Section 39655 through 39662, or which may cause or contribute to an increase in mortality or an increase in serious illness, or potential hazard to human health.

(d) Active Landfill Design and Operation Requirements

The MSW landfill owner or operator shall comply with the provisions of paragraphs (d)(1) through (d)(11):

- (1) If a valid Permit to Construct or Permit to Operate for the collection and control system that meets the requirements of subparagraphs (d)(1)(A) through (d)(1)(C) has not been issued by the District by the adoption date of this rule, submit a site-specific collection and control system design plan. The design plan shall be prepared by a Professional Engineer and sent to the Executive Officer with applications for Permits to Construct or Permits to Operate no later than one year after the adoption of this rule. The Executive Officer shall review the collection and control system design and either approve it, disapprove it, or request that additional information be submitted.

752(b)(2)(i)
752(b)(2)(i)(D)

- (A) The collection and control system shall be designed to handle the maximum expected gas flow rate from the entire area of the landfill that requires control, to minimize migration of subsurface gas to comply with paragraph (d)(4), and to collect gas at an extraction rate to comply with paragraphs (d)(5) and (d)(6). For the purposes of calculating the maximum expected gas generation flow rate from the landfill, one of the equations in 40 CFR, Part 60, Section 60.755(a)(1) shall be used. Another method may be used to determine the maximum gas generation flow rate, if the method has been approved by the Executive Officer.

752(b)(2)(ii)(A)(1), (3), (4)
755(a)(1)
758(b)(1)(i)

- (B) If a valid Permit to Construct or Permit to Operate has not been issued by the District for the collection and control system, the collection and control system design plan shall either conform with

752(b)(2)(i)(C)
756(e)

(Amended March 17, 2000)

specifications for active collection systems in 40 CFR, Part 60, Section 60.759 or include a demonstration to the Executive Officer's satisfaction of the sufficiency of the alternative provisions describing the design and operation of the collection system, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. Alternatives to this rule shall be submitted as specified in subdivision (i).

(C) The design plan shall provide for the control of collected MSW landfill emissions through the use of a collection and control system meeting the applicable requirements in clauses (d)(1)(C)(i) and (d)(1)(C)(ii):

752(b)(2)(iii)

- (i) Route all the collected gas to a control system designed and operated to either reduce NMOC by at least 98 percent by weight or reduce the outlet NMOC concentration to less than 20 parts per million by volume (ppmv), dry basis as hexane at 3 percent oxygen. The required reduction efficiency or ppmv shall be established by an initial source test, required under 40 CFR, Part 60, Section 60.8 and **annually** thereafter using the test methods specified in paragraph (j)(1). The annual source test shall be conducted no later than 45 days after the anniversary date of the initial source test.

ALTERNATIVE: THE FOLLOWING FREQUENCY SHALL BE USED FOR SOURCE TESTING IDENTICAL FLARES LISTED ON ONE PERMIT TO OPERATE WHERE IDENTICAL MEANS, BUT IS NOT LIMITED TO:

MAKE AND MODEL, BURNERS, OPERATIONAL SETTINGS, MAINTENANCE AND FUELS.

SINGLE BACKUP FLARE- AFTER EVERY 4000 HOURS OF OPERATION.

(Amended March 17, 2000)

MULTIPLE BACKUP FLARES - ONE FLARE AFTER EVERY 4000 HOURS OF CUMULATIVE BACKUP OPERATION FOR ALL FLARES LISTED ON THE PERMIT TO OPERATE. ALTERNATE TESTING OF THE FLARES SUCH THAT EACH FLARE IS TESTED.

NON-BACKUP FLARES: AT LEAST ONE FLARE EVERY YEAR AND THEN ALTERNATE ALL OTHERS SUCH THAT EACH IS SOURCE TESTED AT LEAST ONCE EVERY THREE YEARS.

- (I) If a boiler or process heater is used as the control device, the landfill gas stream shall be introduced into the flame zone. Where the landfill gas is the primary fuel for the boiler or process heater, introduction of the landfill gas stream into the flame zone is not required.
- (II) The control device shall be operated within the operating parameter ranges established during the initial or most recent compliant source test. The operating parameters to be monitored are specified under paragraph (e)(6).
- (ii) Route the collected gas to a treatment system that processes the collected gas for subsequent sale or use. All emissions from any atmospheric vent from the gas treatment system shall be subject to the requirements of clause (d)(1)(C)(i).
- (2) Install and operate the collection and control system no later than 18 months after the submittal of the design plan.
- 752(b)(2)(ii)

 (3) If the District has not issued prior written approval for subsurface refuse boundary sampling probes, design and install subsurface refuse boundary sampling probes as specified in Section 1.1, Attachment A, to determine whether landfill gas migration exists. Installation of the refuse boundary probes shall be no later than 18 months after the submittal of the collection and control design plan as specified in paragraph (d)(1).

(Amended March 17, 2000)

ALTERNATIVE: THE SUBSURFACE REFUSE BOUNDARY PROBES APPROVED IN THE PAST OR SUBMITTED WITH THIS APPLICATION, ARE APPROVED. ALL FUTURE DESIGNS AND INSTALLATIONS NOT MEETING THE RULE REQUIREMENTS, SHALL BE SUBMITTED FOR AQMD PRE-CONSTRUCTION APPROVAL WITH A COMPLIANCE PLAN APPLICATION.

- (4) Operate the collection system to prevent the concentration of TOC measured as methane from exceeding five percent by volume in the subsurface refuse boundary sampling probes constructed for the purposes of detecting lateral migration of landfill gas away from the waste mass, as determined from collected samples.

ALTERNATIVE: EXCEPT PROBE E-8-D (AS IDENTIFIED ON "FIGURE 1. SITE PLAN OF BRADELY EAST LANDFILL IN VICINITY OF PROBE E-8" - 12/5/01).

- (5) Operate the collection system to prevent the concentration of TOC measured as methane from exceeding 50 ppmv as determined by integrated samples taken on numbered 50,000 square foot landfill grids.

- (6) Operate the collection system to prevent the concentration of TOC measured as methane from exceeding 500 ppmv above background as determined by instantaneous monitoring at any location on the landfill, except at the outlet of any control device.

- (7) Operate the control or treatment system at all times when the collected gas is routed to the system. In the event the collection, treatment or control system is inoperable, the gas conveying system shall be shut down and all valves in the collection, treatment and control system contributing to venting of the gas to the atmosphere shall be closed no later than one hour after such breakdown or no later than one hour after the time the owner or operator knew or reasonably should have known of its occurrence.

- (8) Operate the collection, treatment and control system until all the exemption criteria under subdivision (k) has been met and the reports specified in subparagraph (f)(2)(D) have been submitted to the Executive Officer.

- (9) Design, install and operate a wind speed and direction monitoring system with a continuous recorder of the requirements in subparagraphs (d)(9)(A)

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and (d)(9)(B), at a site which is representative of the wind speed and direction in the areas being sampled. The wind velocity shall be recorded throughout the sampling period. The wind direction transmitter shall be oriented to true north using a compass. The monitor shall be installed according to the criteria set forth in 40 CFR, Part 50.

- (A) For wind speed use a 3 cup assembly, with a range of 0 to 50 miles per hour, with a threshold of 0.75 mile per hour or less.
 - (B) For wind direction use a vane, with a range of 0 to 540 degrees azimuth, with a threshold of plus-minus 2 degrees.
- (10) Comply with the requirements of Section 21140 – Final Cover, of California Code of Regulations Title 27, Subchapter 5 – Closure and Post-Closure Maintenance, upon closure of a MSW landfill unit, incorporated herein as Attachment B.
 - (11) Comply with the requirement of Section 20200 – State Water Resources Conservation Board (SWRCB) Applicability and Classification Criteria of California Code of Regulations Title 27, Article 2 – SWRCB, Waste Classification and Management, with respect to the disposal of liquids and semi-solid waste at Class III landfills, incorporated herein as Attachment C.

(e) Active Landfill Sampling and Monitoring Requirements

The MSW landfill owner or operator shall comply with the provisions of paragraphs (e)(1) through (e)(6), after installation of the landfill gas control system:

- (1) Monitor and collect samples for analysis as specified in Section 1.0, Attachment A, to **determine the concentrations of TOC and TAC each month** from the subsurface refuse boundary sampling probes, to assure continued compliance. Any measurement of 5 percent TOC by volume or greater shall be recorded as an exceedance and the actions specified in subparagraphs (e)(1)(A) through (e)(1)(C) shall be taken.

ALTERNATIVE: PROBE E-8-D* ONLY, IN LIEU OF COMPLYING WITH PARAGRAPH (d)(4), OR (e)(1)(A-C) WITH RESPECT TO EXCEEDANCES, MONITOR INSTANTANEOUSLY GRID 31 D* PURSUANT TO SECTION 3.0, ATTACHMENT A. THE OPERATOR SHALL RECORD, MAINTAIN AND REPORT THE RESULTS OF THIS MONITORING PURSUANT TO

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**SUBDIVISION (f). *IDENTIFIED IN "FIGURE 1. SITE PLAN OF
BRADELY EAST LANDFILL IN VICINITY OF PROBE E-8" -
12/5/01.**

- (A) The probe shall be identified and the location recorded as specified in Section 1.6, Attachment A.
 - (B) Adjustments to the vacuum of adjacent wells to increase the gas collection in the vicinity of the probe with the exceedance shall be made and the probe resampled no later than 10 calendar days after detecting the exceedance.
 - (C) If the resampling of the probe shows a second exceedance, additional corrective action shall be taken and the probe shall be resampled again no later than 10 calendar days after the second exceedance. If the resampling shows a third exceedance, it is a violation unless the owner or operator determines that a new or replacement gas collection well is needed. The owner or operator must install and operate the new or replacement well no later than 45 days after detecting the third exceedance.
- (2) Collect **monthly integrated** samples for analysis as specified in Section 2.0, Attachment A, to **determine the concentrations of TOC and TAC** from the landfill surface, to assure continued compliance. Any reading of 50 ppmv or greater shall be recorded as an exceedance and the actions specified in subparagraphs (e)(2)(A) through (e)(2)(C) shall be taken.

**ALTERNATIVE: THE LANDFILL SAMPLING GRIDS ARE
DIVIDED INTO THREE TYPES: "A", "B" AND "C".
QUARTERLY FOR TYPE "A" AND "B" GRIDS. ANNUALLY
FOR TYPE "C" GRIDS.**

- (A) The grid shall be identified and the location recorded as specified in Section 2.8, Attachment A.
- (B) Cover maintenance or adjustments to the vacuum of adjacent wells to increase the gas collection in the vicinity of the grid with the exceedance shall be made and the grid resampled no later than 10 calendar days after detecting the exceedance. If measurable precipitation occurs within the 10 calendar days, all resampling and analysis shall comply with Section 2.2.2, Attachment A.

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- (C) If the resampling of the grid shows a second exceedance, additional corrective action shall be taken and the grid shall be resampled again no later than 10 calendar days after the second exceedance. If the resampling shows a third exceedance, it is a violation unless the owner or operator determines that a new or replacement gas collection well is needed. The owner or operator must install and operate the new or replacement well no later than 45 days after detecting the third exceedance.

- (3) Monitor instantaneously as specified in Section 3.0, Attachment A, to determine the concentration of TOC each calendar quarter, to assure continued compliance. Any reading of 500 ppmv TOC or greater shall be recorded as an exceedance and the actions specified in subparagraphs (e)(3)(A) through (e)(3)(C) shall be taken. Any closed landfill that has no monitored exceedances of the 500 ppmv standard in three consecutive quarterly monitoring periods may monitor annually. Any reading of 500 ppmv TOC or more above background detected during the annual monitoring or compliance inspections shall result in a return to quarterly monitoring for that landfill.

755(c)
756(f)

ALTERNATIVE: THE LANDFILL MONITORING GRIDS ARE DIVIDED INTO THREE TYPES: "A", "B" AND "C".

QUARTERLY FOR TYPE "A" AND "B" GRIDS.

QUARTERLY FOR "C" WELL HEADS, POLES, AND OTHER STRUCTURES PROTRUDING INTO THE REFUSE.

ANNUALLY FOR THE SURFACE OF TYPE "C" GRIDS.

- (A) The location of each monitored exceedance shall be marked on the landfill or identified by using a global positioning system and the location recorded as specified in Section 3.4, Attachment A.
- (B) Cover maintenance or adjustments to the vacuum of adjacent wells to increase the gas collection in the vicinity of each exceedance shall be made and the location shall be remonitored no later than 10 calendar days after detecting the exceedance.

(C) If the remonitoring of the location shows a second exceedance, additional corrective action shall be taken and the location shall be remonitored again no later than 10 days after the second exceedance. If the remonitoring shows a third exceedance, it is a violation unless the owner or operator determines that a new or replacement gas collection well is needed. The owner or operator must install and operate the new or replacement well no later than 45 days after detecting the third exceedance.

- (4) Collect a **monthly** landfill gas sample for analysis as specified in Section 4.0, Attachment A, to **determine the concentrations of TOC and TAC** from the main gas collection header line entering the gas treatment and/or gas control systems.

ALTERNATIVE: QUARTERLY

- (5) Collect **monthly** ambient air samples for analysis as specified in Section 5.0, Attachment A, to **determine the concentrations of TOC and TAC** from the landfill property boundary.

ALTERNATIVE: QUARTERLY

- (6) Monitor the collection and control system equipment specified under subparagraphs (e)(6)(A) and (e)(6)(B) in order to comply with subparagraph (d)(1)(C).

(A) For an enclosed combustor install, calibrate, maintain, and operate according to the manufacturer's specifications, the following equipment:

756(b)

(ii) A temperature monitoring device equipped with a continuous recorder and having an accuracy of plus-minus 1 percent of the temperature being measured expressed in degrees Celsius or Fahrenheit. A temperature monitoring device is not required for boilers or process heaters with design heat input capacity greater than 44 megawatts.

(iii) At least one gas flow rate measuring device that shall record the flow to the control device(s) at least every 15 minutes.

- (B) For a device other than an enclosed combustor, demonstrate compliance with subparagraph (d)(1)(C) by providing information satisfactory to the Executive Officer describing the operation of the

756(d)

control device, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. Alternatives to this rule shall be submitted as specified in subdivision (i). The Executive Officer may specify additional appropriate monitoring procedures.

(f) Active Landfill Recordkeeping and Reporting Requirements

The MSW landfill owner or operator shall keep all records up-to-date, readily accessible and maintained for at least a period of 5 years and made available to District staff upon request. Records older than 2 years may be maintained off-site, if they are retrievable no later than 4 hours after request.

758(a)

(1) The records required in subparagraphs (f)(1)(A) through (f)(1)(H) shall be maintained at the facility.

758(b)

(A) For the life of the control equipment as measured during the initial source test or compliance determination:

- (i) The control device vendor specifications.
- (ii) The maximum expected gas generation flow rate as calculated in subparagraph (d)(1)(A).
- (iii) When seeking to demonstrate compliance with subparagraph (d)(1)(C) through the use of an enclosed combustion device other than a boiler or process heater with a design heat input capacity greater than 44 megawatts:

(I) The average combustion temperature measured at least every 15 minutes and averaged over the same time period of the source test.

**ALTERNATIVE: FOR FLARE(S),
CONTINUOUSLY RECORD THE
INSTANTANEOUS COMBUSTION
TEMPERATURE.**

(II) The reduction of NMOC determined as specified in clause (d)(1)(C)(i) achieved by the control device.

(iv) When seeking to demonstrate compliance with subclause (d)(1)(C)(i)(I) through the use of a boiler or process heater of any size: a description of the location at which the collected gas vent stream is introduced into the boiler or

process heater over the same time period of the source testing.

- (B) The data required to be recorded under Section 1.6, Attachment A, for subsurface refuse boundary sampling probes and all remedial actions taken for exceedances of the 5 percent TOC standard required in paragraph (d)(4).
- (C) The data required to be recorded under Section 2.8, Attachment A, for integrated samples and all remedial actions taken for exceedances of the 50 ppmv TOC standard required in paragraph (d)(5).
- (D) The data required to be recorded under Section 3.4, Attachment A, for instantaneous monitoring and all remedial actions taken for exceedances of the 500 ppmv TOC standard required in paragraph (d)(6).
- (E) The data required to be recorded under Section 4.5, Attachment A, for landfill gas samples collected from the main gas collection header line entering the gas treatment and/or gas control systems.
- (F) The data required to be recorded under Section 5.7, Attachment A, from ambient air collected at the landfill property boundary.
- (G) A description and the duration of all periods when the collection, treatment or control device was not operating for a period exceeding one hour and the length of time the system was not operating.
- (H) Continuous records of the equipment operating parameters specified to be monitored under paragraph (e)(6) as well as records for periods of operation during which the parameter boundaries established during the most recent source test are exceeded.
 - (i) The following constitute exceedances that shall be recorded:
 - (I) For enclosed combustors except for boilers and process heaters with design heat input capacity of 44 megawatts (150 million British thermal unit per hour) or greater, all 3-hour periods of operation during which the average combustion temperature was more than 28° C (82° F) below the average

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combustion temperature during the most recent source test at which compliance with subparagraph (d)(1)(C) was determined.

ALTERNATIVE: FOR FLARES, ALL 3-HOUR PERIODS OF OPERATION DURING WHICH THE INSTANTANEOUS COMBUSTION TEMPERATURE WAS MORE THAN 28 DEGREES C (82 DEGREES F) BELOW THE AVERAGE COMBUSTION TEMPERATURE DURING THE MOST RECENT SOURCE TEST AT WHICH COMPLIANCE WITH SUBPARAGRAPH (D)(1)(C) WAS DETERMINED.

FOR BOILERS THIS REQUIREMENT IS NOT APPLICABLE.

- (II) For boilers or process heaters, whenever there is a change in the location at which the vent stream is introduced into the flame zone as required under clause (f)(1)(A)(iv).
 - (ii) Records of the indication of flow to the control device specified under paragraph (e)(6)(A)(ii).
 - (iii) Each owner or operator who uses a boiler or process heater with a design heat input capacity of 44 megawatts or greater to comply with subparagraph (d)(1)(C) shall keep records of all periods of operation of the boiler or process heater. (Examples of such records could include records of steam use, fuel use, or monitoring data collected pursuant to other State, local, Tribal, or Federal regulatory requirements.)
- (2) The reports required in subparagraphs (f)(2)(A) through (f)(2)(D) shall be submitted to the Executive Officer (Either paper copy or electronic formats are acceptable).
 - (A) The initial source test report no later than 180 days after start-up and each succeeding complete annual source test report no later

than 45 days after the anniversary date of the initial source test, for all control systems required in subparagraph (d)(1)(C).

(B) A report no later than 45 days after the last day of each calendar quarter with the information required in clauses (f)(2)(B)(i) and (f)(2)(B)(ii).

(i) All exceedances of the emission standards required in paragraphs (d)(4), (d)(5) and (d)(6) in the format required under Sections 1.6, 2.8 and 3.4, Attachment A. All exceedance resampling/remonitoring and each corrective action required under paragraphs (e)(1), (e)(2) and (e)(3). If there are no exceedances, submit a letter stating there were no exceedances for that quarter.

(ii) All TAC analyses required in paragraphs (e)(1) through (e)(5).

(C) A closure report to the Executive Officer no later than 30 days after waste acceptance cessation. The Executive Officer may request additional information as may be necessary to verify that permanent closure has taken place in accordance with the requirements of 40 CFR, Part 258, Section 258.60 or the applicable federal, state and local statutes, regulations, and ordinances in effect at the time of closure. If a closure report has been submitted to the Executive Officer, no additional wastes shall be placed into the landfill without filing a notification of modification as described under 40 CFR, Part 60, Section 60.7(a)(4).

757(d)

(C) A decommissioning report to the Executive Officer 30 days prior to well capping, removal or cessation of operation of the collection, treatment or control equipment. The decommissioning report shall contain all of the items as specified in clauses (f)(2)(D)(i) through (f)(2)(D)(iii):

757(e)

(i) A copy of the closure report submitted in accordance with subparagraph (f)(2)(C).

(ii) A copy of the initial source test report demonstrating that the collection and control system has been installed a minimum of 15 years.

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- (iii) All records needed to verify the landfill meets the exemption criteria under subdivision (k).

(g) Active Landfill Compliance Schedule

The MSW landfill owner or operator shall comply with the active landfill requirements of this rule or submit alternatives to this rule as specified in subdivision (i) no later than 90 days after April 10, 1998. Rule 1150.1 Compliance Plans previously submitted to the District shall remain in effect during the 90 days after April 10, 1998, or until the owner or operator has received an approved alternative Rule 1150.1 Compliance Plan submitted as specified in subdivision (i).

(h) Inactive Landfill Requirements

The MSW landfill owner or operator shall comply with either the applicable requirements in paragraphs (h)(1) and (h)(2) or submit alternatives to this rule as specified in subdivision (i).

- (1) Inactive landfills that have a landfill gas collection system shall meet all of the active landfill requirements. For those inactive landfills without a gas collection system and determined to need one, meet all of the active landfill requirements, except the collection and control system design plan and applications for permits shall be submitted no later than one year after notification by the Executive Officer.

(2) Inactive landfills without a gas collection system:

- (A) Upon discovery of TOC measured as methane exceeding 500 ppmv at any location on the landfill surface, apply mitigation measures such as compaction, additional cover, and/or watering to reduce the emissions to less than 500 ppmv. The procedure used for measurement of TOC shall meet the requirements of Section 3.0, Attachment A.

- (B) Submit the following Data and/or meet the required action in paragraph (h)(1):

- (i) At any time after the adoption of this rule, but not later than 30 days after the receipt of a request, submit to the Executive Officer a screening questionnaire pursuant to California Air Resources Board Health and Safety Code (H & S) 41805.5.

determine the efficiency of the control system in reducing NMOC by at least 98 percent by weight. If using Method 18, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). The equation in subparagraph (j)(1)(B) shall be used to calculate efficiency.

- (B) U.S. EPA Reference Method 25, 40 CFR, Part 60, Appendix A shall be used to determine the efficiency of the control system in reducing the outlet NMOC concentration to less than 20 ppmv, dry basis as hexane at 3 percent oxygen. Until, but not after District Method 25.3 has met equivalency as specified in paragraph (j)(2), U.S. EPA Reference Method 18, 40 CFR, Part 60, Appendix A may be used for this source test. If using Method 18, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). The following equation shall be used to calculate efficiency:

$$\text{Control Efficiency} = (\text{NMOC}_{\text{in}} - \text{NMOC}_{\text{out}}) / (\text{NMOC}_{\text{in}})$$

where,

NMOC_{in} = mass of NMOC entering control device

NMOC_{out} = mass of NMOC exiting control device

(2) Equivalent Test Methods

Any other method demonstrated to be equivalent and approved in writing by the Executive Officers of the District, the California Air Resources Board (CARB), and the Regional Administrator of the United States Environmental Protection Agency (U.S. EPA), Region IX, or their designees, may be used to determine compliance with this rule.

(k) Exemptions

An MSW landfill may be temporarily exempt from all or any portion of the requirements of this rule if the owner or operator can demonstrate to the Executive Officer that the MSW landfill emissions meet the requirements of paragraphs (k)(1) through (k)(4). Temporary exemption may be independently determined by the Executive Officer, if the MSW landfill emissions meet the requirements of paragraphs (k)(1) through (k)(4). MSW landfills issued temporary exemption

letters by the Executive Officer shall remain exempt, subject to periodic review, provided:

- (1) The MSW landfill complies with the requirements of paragraphs (d)(4), (d)(5) and (d)(6).
- (2) The MSW landfill emits less than 55 tons per year of NMOC as specified in 40 CFR, Part 60, Section 60.752(b) or, for a closed landfill, as specified in 40 CFR, Part 60, Section 60.752(b)(2)(v)(C).
- (3) The MSW landfill constitutes an insignificant health risk. In making this determination the Executive Officer shall consider the listed factors in subparagraphs (k)(3)(A) through (k)(3)(G). Where not specified, in evaluating the cancer risks and hazard indexes, the Executive Officer shall be guided by the definitions in District Rule 1401 - New Source Review of Carcinogenic Air Contaminants, and Rule 1402 - Control of Toxic Air Contaminants From Existing Sources.
 - (A) The proximity to, and any adverse impacts on, residences, schools, hospitals or other locations or structures which have children, or elderly or sick persons.
 - (B) The emission migration beyond the landfill property boundary.
 - (C) The complaint history.
 - (D) The age and closure date.
 - (E) The amount and type of waste deposited.
 - (F) That the emissions of carcinogenic air contaminants, specified in Table 1, Attachment A, from the landfill will not result in a maximum individual cancer risk greater than one in one million (1×10^{-6}) at any receptor location.
 - (G) That the emissions of TAC, specified in Table 1, Attachment A, from the landfill will not result in a total acute or chronic Hazard Index of greater than 1.
- (4) The MSW landfill is in compliance with District Nuisance Rule 402.

Such temporary exemption shall be reviewed periodically by the Executive Officer, to consider the land use surrounding the landfill and gaseous emissions, and the impact on the public. Depending upon the results of the review, the Executive Officer may extend or terminate the exemption.

(I) Loss of Exemption

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If an MSW landfill should have its temporary exemption terminated, the owner or operator shall comply with the active landfill requirements of this rule.

ATTACHMENT A

1.0 SUBSURFACE REFUSE BOUNDARY SAMPLING PROBES

Paragraph (d)(4) and (e)(1) Requirements of Rule 1150.1

1.1 Subsurface Probe Design and Installation

Landfills which are subject to Rule 1150.1 must install and maintain a subsurface refuse boundary probe sampling system of adequate design to determine if gas migration exists for the ultimate purpose of preventing surface emissions. The California Integrated Waste Management Board also requires the installation of refuse boundary probes for purposes of detecting and ultimately preventing subsurface migration of landfill gas past the permitted property boundary of the landfill/disposal site as well as the prevention of the accumulation of landfill gas in on-site structures. It is the District's intent that the subsurface refuse boundary probes required by paragraph (d)(3) of Rule 1150.1 be designed and installed in such a manner as to comply with the requirements of the California Integrated Waste Management Board (whenever possible) and Sections 1.1.1 through 1.1.4.

1.1.1 The probes shall be installed within the landfill property line and outside the refuse disposal area.

1.1.2 Wherever accessible, the probes shall be located no further than 100 feet from the refuse boundary.

ALTERNATIVE: WHEREVER ACCESSIBLE AND THE PROBES ARE GREATER THAN 100 FEET FROM THE REFUSE, MONITOR INSTANTANEOUSLY FROM THE REFUSE BOUNDARY TO THE PROBE, USING THE GRID METHOD EVERY QUARTER AND WHEN PROBES EXCEED 2% TOC.

1.1.3 The spacing between probes shall be based on the adjacent land use no further than 1320 feet (1/4 mile) from the refuse boundary and shall be determined as follows:

| LAND USE | SPACING |
|--------------------------------------------|----------------|
| Residential/Commercial | 100 feet |
| Public Access | 500 feet |
| Undeveloped Open Space, (No Public Access) | 650 feet |
| Landfill with Liners | 1000 feet |

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(Attachment A Continued)

- 1.1.4 Each probe shall be capped, sealed, have a sampling valve and be of multiple-depth design for which the depth shall be determined based on the depth of refuse no further than 500 feet from the probe as follows:

| | |
|--------------|--------------------------------------------------------------------|
| First Depth | 10 feet below surface. |
| Second Depth | 25% of refuse depth or 25 feet below surface, whichever is deeper. |
| Third Depth | 50% of refuse depth or 50 feet below surface, whichever is deeper. |
| Fourth Depth | 75% of refuse depth or 75 feet below surface, whichever is deeper. |

Second, third, or fourth depth probes may be deleted if the required depth of such probe is deeper than the depth of the refuse.

1.2 Number of Samples

All refuse boundary gas probes at each depth shall be monitored monthly for TOC measured as methane using a portable flame ionization detector (FID) meeting the requirements of Section 3.2 and with a tube connected to the probe sampling valve. In addition, samples shall be taken as specified in Section 1.2.1 or 1.2.2 to determine the concentration of both TOC and TAC. The Executive Officer may require additional probes to be sampled upon written request.

1.2.1 If the TOC concentration measured with the FID does not exceed 5% by volume in any of the probes, collect one bag sample from one probe with the highest concentration, or

1.2.2 If the TOC concentration measured with the FID for any of the probes exceeds 5% by volume, collect one bag sample per probe from the probes with the highest concentrations above 5% by volume, from at least five probes.

1.3 Subsurface Refuse Boundary Probe Sampling Procedure

1.3.1 Prior to collecting gas samples, evacuate the probe (the probes must be sealed during evacuation) until the TOC concentration remains constant for at least 30 seconds.

1.3.2 The constant TOC concentration shall be measured using an FID that meets the requirements in Section 3.2.

ALTERNATIVE: PORTABLE ANALYZERS ON AN APPROVED LIST OF EQUIPMENT MAINTAINED BY THE AQMD MAY BE

USED AS ALTERNATIVES FOR THE SAMPLER/INSTRUMENT REQUIREMENTS OF THIS RULE.

- 1.3.3 Collect approximately a 10-liter gas sample in a Tedlar (Dupont trade name for polyvinyl) bag or equivalent container over a continuous ten-minute period using the evacuated container sampling procedure described in Section 7.1.1 of EPA Method 18 or direct pump sampling procedure described in Section 7.1.2 of EPA Method 18. The container shall be LIGHT-SEALED.
- 1.4 **Subsurface Refuse Boundary Probe Analytical Procedures**
All samples collected shall be analyzed no later than 72 hours after collection for TOC using U.S. EPA Method 25, 40 CFR, Part 60, Appendix A analysis or a portable FID that meets the requirements in Section 3.2 and for the TAC specified in Table 1 and upon written request, Table II, using U.S. EPA Compendium Method TO-14.
- 1.5 **Chain of Custody (Required for samples sent to the lab)**
A custody sheet shall accompany the bag samples. Each time a bag changes hands, it shall be logged on the custody sheet with the time of custody transfer recorded. Laboratory personnel shall record the condition of the sample (full, three-fourths full, one-half full, one-fourth full, or empty). An example of a custody sheet is shown in Figure 4.
- 1.6 **Recording the Results**
 - 1.6.1 Record the volume concentration of TOC measured as methane for each individually identified refuse boundary probe (at each depth) and the volume concentration of TAC for selected probes on a quality control sheet as shown in Figure 3. Include a topographic map drawn to scale with the location of both the refuse boundary probes and the gas collection system clearly marked and identified.
 - 1.6.2 Maintain and submit the results as specified in subdivision (f) of Rule 1150.1.
- 2.0 **INTEGRATED LANDFILL SURFACE SAMPLING**
Paragraph (d)(5) and (e)(2) Requirements of Rule 1150.1
- 2.1 **Number of Samples**

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(Attachment A Continued)

The number of samples collected will depend on the area of the landfill surface. The entire landfill disposal area shall be divided into individually identified 50,000 square foot grids. One monthly sample shall be collected from each grid for analysis. Any area that the Executive Officer deems inaccessible or dangerous for a technician to enter may be excluded from the sampling grids monitored by the landfill owner or operator. To exclude an area from monitoring, the landfill owner or operator shall file a written request with the Executive Officer. Such a request shall include an explanation of the requested exclusion and photographs of the area. The Executive Officer shall notify the landfill owner or operator in writing of the decision. Any exclusion granted shall apply only to the monitoring requirement. The 50 ppmv limit specified in paragraph (d)(5) of Rule 1150.1 applies to all areas.

ALTERNATIVE: SAMPLING IS NOT REQUIRED FOR THE FOLLOWING LANDFILL SURFACES: PORTIONS OF SLOPES 30 DEGREES AND GREATER, PAVED SURFACES EXCEPT FOR CRACKS, THE ACTIVE WORKING FACE, THE MAIN HAUL ROAD AND TEMPORARY STOCKPILES FIVE (5) FEET OR MORE IN HEIGHT. A TEMPORARY STOCKPILE DOES NOT INCLUDE A CLOSED LANDFILL FINAL COVER OR CAP.

2.2 Integrated Surface Sampling Conditions

2.2.1. The average wind speed during this sampling procedure shall be five miles per hour or less. Surface sampling shall be terminated when the average wind speed exceeds five miles per hour or the instantaneous wind speed exceeds ten miles per hour. Average wind speed is determined on a 15-minute average.

2.2.2. Surface sampling shall be conducted when the landfill is dry. The landfill is considered dry when there has been no measurable precipitation for the preceding 72 hours prior to sampling. Most major newspapers report the amount of precipitation that has fallen in a 24-hour period throughout the Southern California area. Select the nearest reporting station that represents the landfill location or provide for measurable precipitation collection at the MSW landfill wind monitoring station.

2.3 Integrated Surface Sampler Equipment Description

(Attachment A Continued)

An integrated surface sampler is a portable self-contained unit with its own internal power source. The integrated sampler consists of a stainless steel collection probe, a rotameter, a pump, and a 10-liter Tedlar bag enclosed in a LIGHT-SEALED CONTAINER to prevent photochemical reactions from occurring during sampling and transportation. The physical layout of the sampler is shown in Figure 1.

An alternate integrated surface sampler may be used, provided that the landfill owner or operator can show an equivalency with the sampler specifications in Section 2.4 and shown in Figure 1. All alternatives shall be submitted as specified in subdivision (i) of Rule 1150.1.

ALTERNATIVE: PORTABLE ANALYZERS ON AN APPROVED LIST OF EQUIPMENT MAINTAINED BY THE AQMD MAY BE USED AS ALTERNATIVES FOR THE SAMPLER/INSTRUMENT REQUIREMENTS OF THIS RULE.

2.4 Integrated Surface Sampler Equipment Specifications

2.4.1 Power: Batteries or any other power source.

2.4.2 Pump: The diaphragm shall be made of non-lubricated Viton (Dupont trade name for co-polymer of hexafluoropropylene and vinylidene fluoride) rubber.

2.4.3 Bag: One 10-liter Tedlar bag with a valve. The Tedlar bag shall be contained in a LIGHT-SEALED CONTAINER. The valve shall be leak free and constructed of aluminum, stainless steel, or non-reactive plastic with a Viton or Buna-N (butadiene acrylonitrile co-polymer) o-ring seal.

2.4.4 Rotameter: The rotameter shall be made of borosilicate glass or other non-reactive material and have a flow range of approximately 0-to-1 liter per minute. The scale shall be in milliliters or an equivalent unit. The graduations shall be spaced to facilitate accurate flow readings.

2.4.5 Air Flow Control Orifice: Needle valve in the rotameter.

2.4.6 Funnel: 316 stainless steel.

2.4.7 Fittings, Tubing and Connectors: 316 stainless steel or Teflon.

2.5 Integrated Surface Sampling Procedure

2.5.1 An integrated surface sampler as described in Section 2.4 shall be used to collect a surface sample approximately 8-to-10 liters from each grid.

(Attachment A Continued)

- 2.5.2 During sampling, the probe shall be placed 0-to-3 inches above the landfill surface.
- 2.5.3 The sampler shall be set at a flow rate of approximately 333 cubic centimeters per minute
- 2.5.4 Walk through a course of approximately 2,600 linear feet over a continuous 25-minute period. Figure 2 shows a walk pattern for the 50,000 square foot grid.

ALTERNATIVE: THE LANDFILL SAMPLING GRIDS ARE DIVIDED INTO THREE TYPES CONSISTING OF TYPE "A", TYPE "B" AND TYPE "C" AS REFERENCED IN THE MAP SUBMITTED 4/27/00 OR THE MOST RECENT UPDATE, WITH SHEET TITLE "PLAN-INTEGRATED SURFACE EMISSIONS MONITORING GRIDS". THE THREE TYPES OF GRIDS ARE DEFINED AS: TYPE "A" - NO EXCLUSIONS FROM SAMPLING; TYPE "B" - CONTAINING STEEP SLOPES OR STEEP SLOPES AND DENSE VEGETATION ON GRIDS 121, 122, 128, AND 130; AND TYPE "C" - THE AREA OF ACTIVE RECYCLING OPERATIONS. THE TOPOGRAPHIC MAP SHALL BE DRAWN TO SCALE CLEARLY IDENTIFYING TOPOGRAPHICAL FEATURES OF THE LANDFILL WITH CONTOUR LINES. THE LOCATION OF ALL SAMPLING GRIDS AND THE GAS COLLECTION SYSTEM SHALL BE CLEARLY MARKED AND IDENTIFIED. THE SUBMITTED TOPOGRAPHICAL MAP WILL BE FILED IN THE APPLICATION FOLDER AND USED FOR COMPLIANCE. A SMALLER 11" BY 17" TOPOGRAPHICAL MAP IS ATTACHED TO THIS PLAN FOR FIELD REFERENCE. THE TOPOGRAPHICAL MAPS SHALL BE CONFIRMED OR UPDATED ANNUALLY BY THE OWNER/OPERATOR OR AS REQUESTED BY THE EXECUTIVE OFFICER.

SAMPLING OF TYPE "A" SURFACE GRIDS SHALL BE ACCORDING TO THE RULE.

SAMPLING OF TYPE "B" SURFACE GRIDS SHALL CONSIST OF SAMPLING THE TOE OF GRIDS 121, 128, AND 130 AND THE TOP OF GRID 122. VACUUM READINGS FROM ALL GAS EXTRACTION WELLS LOCATED ON TYPE "B" GRIDS SHALL BE RECORDED MONTHLY AND INCLUDED IN THE QUARTERLY REPORT. GRIDS 121 AND 122 EACH DEFINED AS A TYPE "B" GRID, SHALL BE REDESIGNATED AS A TYPE "A" GRID WHEN ENOUGH ADDITIONAL REFUSE HAS BEEN PUT IN PLACE.

SAMPLING OF TYPE "C" SURFACE GRIDS SHALL CONSIST OF SAMPLING A COURSE OF APPROXIMATELY 2,600 LINEAR FEET BUT NOT LESS THAN 1900 LINEAR FEET IN EACH GRID FOR A CONTINUOUS 25-MINUTE PERIOD EXCLUDING STOCKPILES, STORED EQUIPMENT AND RECYCLING EQUIPMENT. RULE 1150.1, ATTACHMENT A, FIGURE 2 SHOWS A 50,000 SQUARE FOOT GRID WALK PATTERN THAT WILL BE MODIFIED TO AVOID THE EXCLUSIONS. VACUUM READINGS FROM ALL GAS EXTRACTION WELLS LOCATED ON TYPE "C" ACTIVE RECYCLING GRIDS SHALL BE RECORDED MONTHLY AND INCLUDED IN THE QUARTERLY REPORT.

2.6 Integrated Surface Sample Analytical Procedures

All samples collected shall be analyzed no later than 72 hours after collection for TOC using U.S. EPA Method 25, 40 CFR, Part 60, Appendix A analysis or a portable FID that meets the requirements in Section 3.2. In addition, the samples specified in Section 2.6.1 or 2.6.2 must be analyzed no later than 72 hours after collection for the TAC specified in Table 1 and upon written request, Table II, using U.S. EPA Compendium Method TO-14.

2.6.1 Ten percent of all samples which have a concentration of TOC greater than 50 ppmv as methane, or

2.6.2 Two samples if all samples are 50 ppmv or less of TOC or two samples if there are less than 20 samples above 50 ppmv.

The Executive Officer may require more samples to be tested for TAC if he determines there is a potential nuisance or public health problem.

Alternative Compliance Plan For Bradley Landfill, Issue No. 3

Rule 1150.1 (Cont.)

(Amended March 17, 2000)

(Attachment A Continued)

2.7 Chain of Custody (Required for samples sent to the lab)

A custody sheet shall accompany the bag samples. Each time a bag changes hands, it shall be logged on the custody sheet with the time of custody transfer recorded. Laboratory personnel shall record the condition of the sample (full, three-fourths full, one-half full, one-fourth full, or empty). An example of a custody sheet is shown in Figure 4.

2.8 Recording the Results

2.8.1 Record the volume concentration of both TOC measured as methane for each grid and the volume concentration for the required TAC on a quality control sheet as shown in Figure 3. Include a topographic map drawn to scale with the location of the grids and the gas collection system clearly marked and identified.

2.8.2 Record the wind speed during the sampling period using the wind speed and direction monitoring system required in paragraph (d)(9) of Rule 1150.1.

2.8.3 Maintain and submit the results as specified in subdivision (f) of Rule 1150.1.

3.0 INSTANTANEOUS LANDFILL SURFACE MONITORING
Subparagraph (d)(6) and (e)(3) Requirements of Rule 1150.1

3.1 Monitoring Area

The entire landfill disposal area shall be monitored once each calendar quarter. Any area of the landfill that the Executive Officer deems as inaccessible or dangerous for a technician to enter may be excluded from the area to be monitored by the landfill owner or operator. To exclude an area from monitoring, the landfill owner or operator shall file a petition with the Executive Officer. Such a request shall include an explanation of why the area should be excluded and photographs of the area. Any excluded area granted shall only apply to the monitoring requirement. The 500 ppmv limit specified in paragraph (d)(6) of Rule 1150.1 applies to all areas.

ALTERNATIVE: MONITORING IS NOT REQUIRED FOR THE FOLLOWING LANDFILL SURFACES: PORTIONS OF SLOPES 30 DEGREES AND GREATER, PAVED SURFACES EXCEPT FOR CRACKS, THE ACTIVE WORKING FACE, THE MAIN HAUL ROAD

(Attachment A Continued)

AND TEMPORARY STOCKPILES FIVE (5) FEET OR MORE IN HEIGHT. A TEMPORARY STOCKPILE DOES NOT INCLUDE A CLOSED LANDFILL FINAL COVER OR CAP.

3.2 Equipment Description and Specifications

A portable FID shall be used to instantaneously measure the concentration of TOC measured as methane at any location on the landfill. The FID shall meet the specifications listed in Sections 3.2.1 through 3.2.4 and shall be kept in good operating condition.

3.2.1 The portable analyzer shall meet the instrument specifications provided in Section 3 of U.S. EPA Method 21, except that:

3.2.1.1 "Methane" shall replace all references to VOC.

3.2.1.2 A response time of 15 seconds or shorter shall be used instead of 30 seconds.

3.2.1.3 A precision of 3% or better shall be used instead of 10%.
In addition the instrument shall meet the specifications in Sections 3.2.1.4 through 3.2.1.6.

3.2.1.4 A minimum detectable limit of 5 ppmv (or lower).

3.2.1.5 A flame-out indicator, audible and visual.

3.2.1.6 Operate at an ambient temperature of 0 - 50°C.

3.2.2 The calibration gas shall be methane, diluted to a nominal concentration of 10,000 ppmv in air for subsurface refuse boundary probe monitoring and sample analysis to comply with paragraph (e)(1) of Rule 1150.1, 50 ppmv in air for integrated sample analyses to comply with paragraph (e)(2) of Rule 1150.1 and 500 ppmv in air for instantaneous monitoring to comply with paragraph (e)(3) of Rule 1150.1.

3.2.3 To meet the performance evaluation requirements in Section 3.1.3 of U.S. EPA Method 21, the instrument evaluation procedures of Section 4.4 of U.S. EPA Method 21 shall be used.

3.2.4 The calibration procedures provided in Section 4.2 of U.S. EPA Method 21 shall be followed at the beginning of each day before commencing a surface monitoring survey.

3.3 Monitoring Procedures

- 3.3.1 The owner or operator shall monitor the landfill disposal area for TOC measured as methane using the described portable equipment.
- 3.3.2 The sampling probe shall be placed at a distance of 0-3 inches above any location of the landfill to take the readings.
- 3.3.3 At a minimum, an individually identified 50,000 square foot grid shall be used and a walk pattern as illustrated in Figure 2 shall be implemented including areas where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover.

ALTERNATIVE: THE LANDFILL MONITORING GRIDS ARE DIVIDED INTO THREE TYPES CONSISTING OF TYPE "A", TYPE "B" AND TYPE "C" AS REFERENCED IN THE MAP SUBMITTED 4/27/00 OR THE MOST RECENT UPDATE, WITH SHEET TITLE "PLAN-INTEGRATED SURFACE EMISSIONS MONITORING GRIDS". THE THREE TYPES OF GRIDS ARE DEFINED AS: TYPE "A" - NO EXCLUSIONS FROM SAMPLING; TYPE "B" - CONTAINING STEEP SLOPES OR STEEP SLOPES AND DENSE VEGETATION ON GRIDS 121, 122, 128, AND 130; AND TYPE "C" - THE AREA OF ACTIVE RECYCLING OPERATIONS. THE TOPOGRAPHIC MAP SHALL BE DRAWN TO SCALE CLEARLY IDENTIFYING TOPOGRAPHICAL FEATURES OF THE LANDFILL WITH CONTOUR LINES. THE LOCATION OF ALL MONITORING GRIDS AND THE GAS COLLECTION SYSTEM SHALL BE CLEARLY MARKED AND IDENTIFIED. THE SUBMITTED TOPOGRAPHICAL MAP WILL BE FILED IN THE APPLICATION FOLDER AND USED FOR COMPLIANCE. A SMALLER 11" BY 17" TOPOGRAPHICAL MAP IS ATTACHED TO THIS PLAN FOR FIELD REFERENCE. THE TOPOGRAPHICAL MAPS SHALL BE CONFIRMED OR UPDATED ANNUALLY BY THE OWNER/OPERATOR OR AS REQUESTED BY THE EXECUTIVE OFFICER.

MONITORING OF TYPE "A" SURFACE GRIDS SHALL BE ACCORDING TO THE RULE.

(Attachment A Continued)

MONITORING OF TYPE "B" SURFACE GRIDS SHALL CONSIST OF MONITORING THE TOE OF GRIDS 121, 128, AND 130 AND THE TOP OF GRID 122. VACUUM READINGS FROM ALL GAS EXTRACTION WELLS LOCATED ON TYPE "B" GRIDS SHALL BE RECORDED MONTHLY AND INCLUDED IN THE QUARTERLY REPORT. GRIDS 121 AND 122 EACH DEFINED AS A TYPE "B" GRID, SHALL BE REDESIGNATED AS A TYPE "A" GRID WHEN ENOUGH ADDITIONAL REFUSE HAS BEEN PUT IN PLACE.

MONITORING OF TYPE "C" SURFACE GRIDS SHALL CONSIST OF MONITORING A COURSE OF APPROXIMATELY 2,600 LINEAR FEET BUT NOT LESS THAN 1900 LINEAR FEET IN EACH GRID, EXCLUDING STOCKPILES, STORED EQUIPMENT AND RECYCLING EQUIPMENT. RULE 1150.1, ATTACHMENT A, FIGURE 2 SHOWS A 50,000 SQUARE FOOT GRID WALK PATTERN THAT WILL BE MODIFIED TO AVOID THE EXCLUSIONS. VACUUM READINGS FROM ALL GAS EXTRACTION WELLS LOCATED ON TYPE "C" RECYCLING GRIDS SHALL BE RECORDED MONTHLY AND INCLUDED IN THE QUARTERLY REPORT.

3.4 Recording the Results

3.4.1 Record the location and concentration of TOC measured as methane for any instantaneous reading of 500 ppmv or greater on a topographic map of the landfill, drawn to scale with the location of both the grids and the gas collection system clearly marked and identified.

3.4.2 Maintain and submit the results as specified in subdivision (f) of Rule 1150.1.

4.0 LANDFILL GAS SAMPLE FROM GAS COLLECTION SYSTEM
Subparagraph (e)(4) Requirement of Rule 1150.1

4.1 Number of Samples

Collect one monthly sample of landfill gas for analysis from the main gas collection header line entering the gas treatment and/or gas control system(s).

Alternative Compliance Plan For Bradley Landfill, Issue No. 3.

Rule 1150.1 (Cont.)

(Amended March 17, 2000)

(Attachment A Continued)

4.2 Sampling Procedure

Collect approximately a 10-liter sample in a Tedlar bag or equivalent container over a continuous ten-minute period.

4.3 Analytical Procedures

Samples collected shall be analyzed no later than 72 hours after collection for TOC using U.S. EPA Method 25, 40 CFR, Part 60, Appendix A analysis and for the TAC specified in Table 1 and upon written request, Table II, using U.S. EPA Compendium Method TO-14.

4.4 Chain of Custody (Required for samples sent to the lab)

A custody sheet shall accompany the bag samples. Each time a bag changes hands, it shall be logged on the custody sheet with the time of custody transfer recorded. Laboratory personnel shall record the condition of the sample (full, three-fourths full, one-half full, one-fourth full, or empty). An example of a custody sheet is shown in Figure 4.

4.5 Recording the Results

4.5.1 Record the volume concentration of both TOC measured as methane and the volume concentration for the required TAC on a quality control sheet as shown in Figure 3. Include a topographic map drawn to scale with the location of the gas collection and control system clearly marked and identified.

4.5.2 Maintain and submit the results as specified in subdivision (f) of Rule 1150.1.

5.0 AMBIENT AIR SAMPLES AT THE LANDFILL PROPERTY BOUNDARY
Subparagraph (e)(5) Requirement of Rule 1150.1

5.1 Number of Samples

Monthly ambient air samples shall be collected for analysis at the landfill property boundary from both an upwind and downwind sampler sited to provide good meteorological exposure to the predominant offshore (drainage land breeze) and onshore (sea breeze) wind flow patterns. The upwind and downwind samples shall be collected simultaneously over two 12 hour periods beginning between 9:00 a.m. and 10:00 a.m., and 9:00 p.m. and 10:00 p.m. on the same day or different days.

5.2 Ambient Air Sampling Conditions

(Attachment A Continued)

Ambient air sampling shall be conducted on days when stable (offshore drainage) and unstable (onshore sea breeze) meteorological conditions are representative for the season. Preferable sampling conditions are characterized by the following meteorological conditions:

5.2.1 Clear cool nights with wind speeds of two miles per hour or less, and

5.2.2 Onshore sea breezes with wind speeds ten miles per hour or less.

No sampling will be conducted if the following adverse meteorological conditions exist:

5.2.3 Rain,

5.2.4 Average wind speeds greater than 15 miles per hour for any 30-minute period, or

5.2.5 Instantaneous wind speeds greater than 25 miles per hour.

Continuously recorded on-site wind speed and direction measurements required in paragraph (d)(9) of Rule 1150.1 will characterize the micrometeorology of the site and serve to verify that the meteorological criteria have been met during sampling.

5.3 Ambient Air Sampler Equipment Description

An ambient air sampling unit consists of a 10-liter Tedlar bag, a DC-operated pump, stainless steel capillary tubing to control the sample rate to the bag, a bypass valve to control the sample flow rate (and minimize back pressure on the pump), a Rotameter for flow indication to aid in setting the flow, a 24-hour clock timer to shut off the sampler at the end of the 24-hour sampling period, and associated tubing and connections (made of stainless steel, Teflon, or borosilicate glass to minimize contamination and reactivity). The physical layout of the sampler is shown in Figure 5.

An alternate ambient air sampler may be used, provided that the landfill owner or operator can show an equivalency with the sampler specifications in Section 5.3 and shown in Figure 5. All alternatives shall be submitted as specified in subdivision (i) of Rule 1150.1.

5.4 Ambient Air Sampler Equipment Specifications

The equipment used when conducting air samples at any landfill property boundary shall meet the following specifications:

5.4.1 Power: one 12V DC marine battery. The marine battery provides 12V DC to the pump and the clock.

Alternative Compliance Plan For Bradley Landfill, Issue No. 3

Rule 1150.1 (Cont.)

(Amended March 17, 2000)

(Attachment A Continued)

- 5.4.2 Pump: one 12V DC pump. The diaphragm shall be made of non-lubricated Viton rubber. The maximum pump unloaded flow rate shall be 4.5 liters per minute.
- 5.4.3 Bag: One 10-liter Tedlar bag with a valve. The Tedlar bag shall be enclosed in a LIGHT-SEALED CONTAINER. The valve is a push-pull type constructed of aluminum and stainless steel, with a Viton or Buna-N (butadiene acrylonitrile co-polymer) o-ring seal.
- 5.4.4 Rotameter - made of borosilicate glass and has a flow range of 3-to-50 cubic centimeters per minute. The scale is in millimeters (mm) with major graduations (labeled) every 5 mm and minor graduations every 1 mm.
- 5.4.5 Air flow control orifice: 316 stainless steel capillary tubing.
- 5.4.6 Bypass valve.
- 5.4.7 Fittings, tubing, and connectors -- 315 stainless steel or Teflon.
- 5.4.8 Clock timer with an accuracy of better than 1%.
- 5.5 Ambient Air Sample Analytical Procedures

Samples collected must be analyzed no later than 72 hours after collection for TOC using U.S. EPA Method 25, 40 CFR, Part 60, Appendix A analysis or a portable FID that meets the requirements in Section 3.2 and for the TAC specified in Table 1 and upon written request, Table II, using U.S. EPA Compendium Method TO-14.
- 5.6 Chain of Custody (Required for samples sent to the lab)

A custody sheet shall accompany the bag samples. Each time a bag changes hands, it shall be logged on the custody sheet with the time of custody transfer recorded. Laboratory personnel shall record the condition of the sample (full, three-fourths full, one-half full, one-fourth full, or empty). An example of a custody sheet is shown in Figure 4.
- 5.7 Recording the Results
 - 5.7.1 Record the volume concentration of TOC measured as methane and the volume concentration of TAC for each sample on a quality control sheet as shown in Figure 3. Include a topographic map drawn to scale with the location of both the upwind and downwind samplers and the gas collection and control system clearly marked and identified.

Alternative Compliance Plan For Bradley Landfill, Issue No. 3

Rule 1150.1 (Cont.)

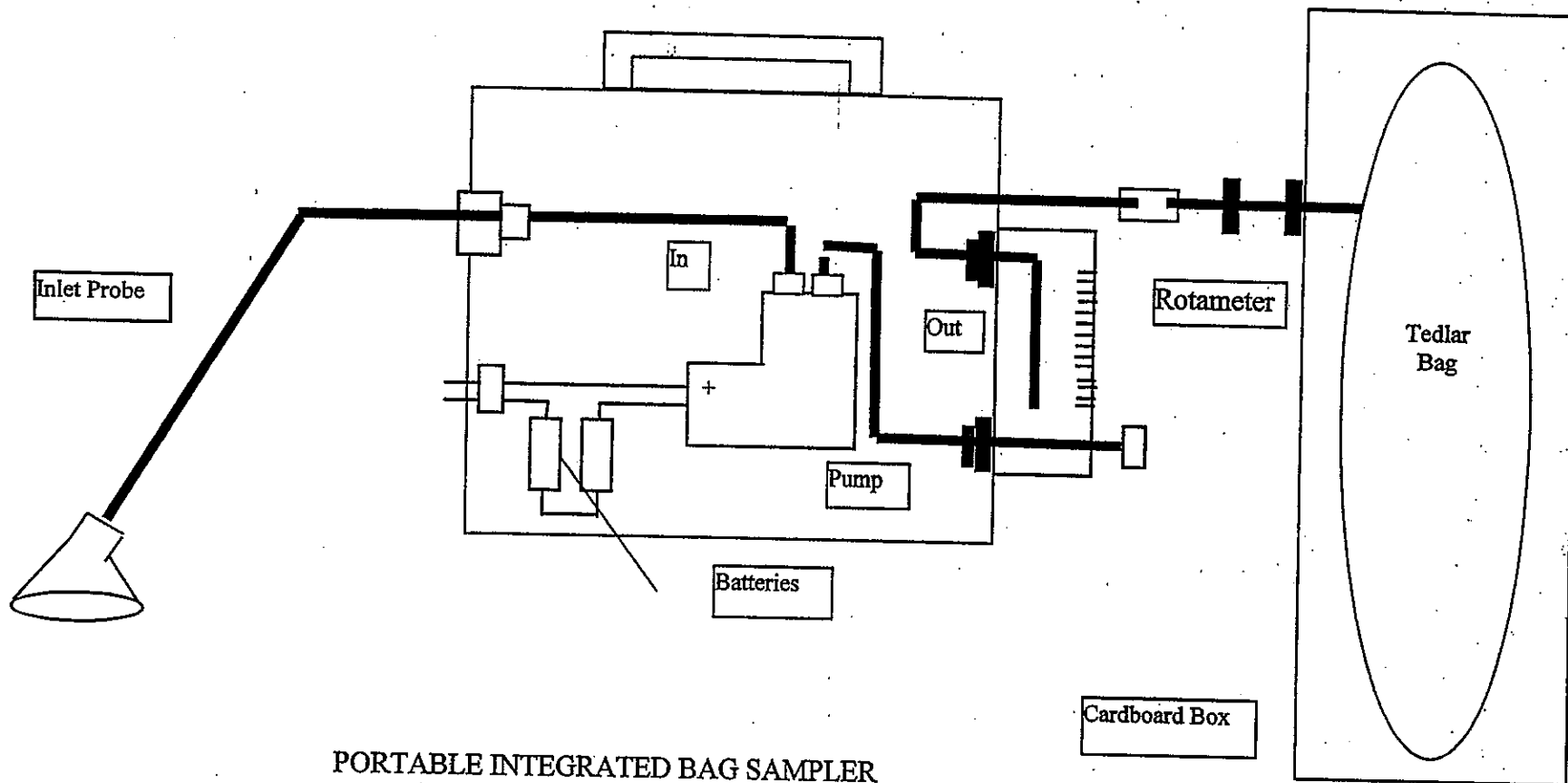
(Amended March 17, 2000)

(Attachment A Continued)

5.7.2 Record the wind speed and direction during the 24-hour sampling period using the wind speed and direction monitoring system required in paragraph (d)(9) of Rule 1150.1.

5.7.3 Maintain and submit the results as specified in subdivision (f) of Rule 1150.1.

(Amended March 17, 2000)



PORTABLE INTEGRATED BAG SAMPLER
Physical Layout

Figure 1

Typical Landfill Walk Pattern
for a 50,000 Square Foot Grid

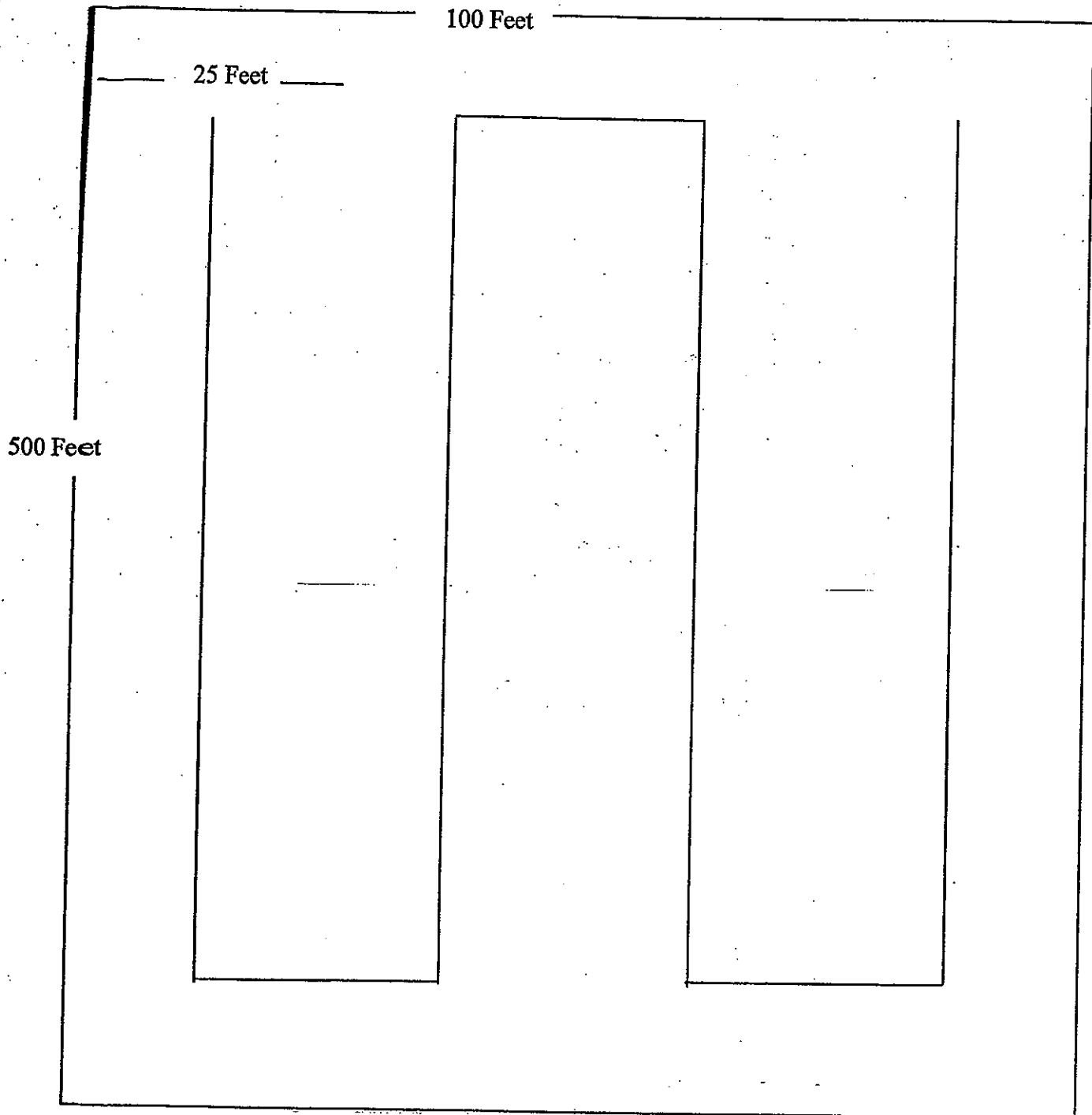


Figure 2

Alternative Compliance Plan For Bradley Landfill, Issue No. 3
Rule 1150.1 (Cont.)
(Attachment A Continued)

(Amended March 17, 2000)

BAG SAMPLE CUSTODY FORM

Project _____

Date: _____

| Bag (I.D. #) | | | | | | | | | |
|----------------------------|--|--|--|--|--|--|--|--|--|
| Condition Received in Lab* | | | | | | | | | |

Bags Prepared By: _____

Time: _____

Bags Taken Out By: _____

Date: _____

Bags Taken to Lab By _____

Time: _____

Bags Received In Lab By: _____

Time: _____

- * F = 1/2 full to full, O = Overfull (Bulging), L = 1/4 to 1/2 full,
 E = Less than 1/4 full but contains some sample, N = No sample at all.

Figure 4

(Amended March 17, 2000)

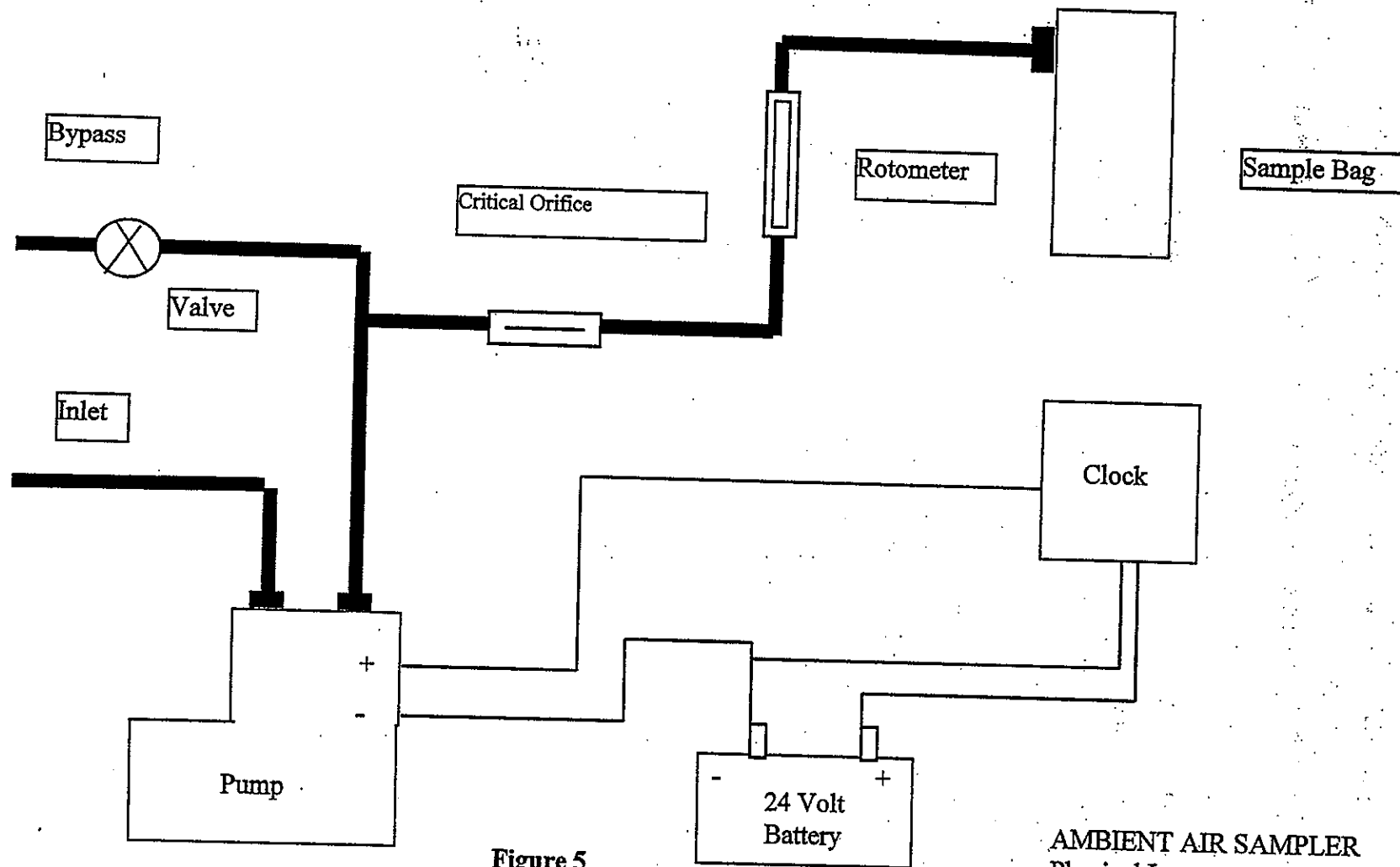


Figure 5

AMBIENT AIR SAMPLER
Physical Layout

TABLE 1 - CARCINOGENIC AND TOXIC AIR CONTAMINANTS

(Core Group)

Paragraph (e)(2), Subparagraphs (k)(3)(F) and (k)(3)(G) Requirements of Rule 1150.1

| | | |
|-----|-------------------------------------------|------------------|
| 1. | Benzene | C_6H_6 |
| 2. | Benzyl Chloride | $C_6H_5H_2Cl$ |
| 3. | Chlorobenzene | C_6H_5Cl |
| 4. | 1,2 Dibromoethane (Ethylene Dibromide) | $BrCH_2CH_2Br$ |
| 5. | Dichlorobenzene | $C_6H_4Cl_2$ |
| 6. | 1,1 Dichloroethane (Ethylidene Chloride) | CH_3CHCl_2 |
| 7. | 1,2 Dichloroethane (Ethylene Dichloride) | ClH_2H_2Cl |
| 8. | 1,1 Dichloroethene (Vinylidene Chloride) | $CH_2 : CCl_2$ |
| 9. | Dichloromethane (Methylene Chloride) | CH_2Cl_2 |
| 10. | Hydrogen Sulfide | H_2S |
| 11. | Tetrachloroethylene (Perchloroethylene) | $Cl_2C : CCl_2$ |
| 12. | Tetrachloromethane (Carbon Tetrachloride) | CCl_4 |
| 13. | Toluene | $C_6H_5CH_3$ |
| 14. | 1,1,1 Trichloroethane (Methyl Chloroform) | CH_3CCl_3 |
| 15. | Trichloroethylene | $CHCl : CCl_2$ |
| 16. | Trichloromethane (Chloroform) | $CHCl_3$ |
| 17. | Vinyl Chloride | $CH_2 : CHCl$ |
| 18. | Xylene | $C_6H_4(CH_3)_2$ |

(Amended March 17, 2000)

TABLE 2 - CARCINOGENIC AND TOXIC AIR CONTAMINANTS

(Supplemental Group)

Paragraph (e)(2), Subparagraphs (k)(3)(F) and (k)(3)(G) Requirements of Rule 1150.1

| | | |
|-----|-----------------------------------|--------------------------------------------------------|
| 1. | Acetaldehyde | CH_3CHO |
| 2. | Acrolein | CH_2CHCHO |
| 3. | Acrylonitrile | $\text{H}_2\text{C} : \text{CHCN}$ |
| 4. | Allyl Chloride | $\text{H}_2\text{C} : \text{CHCH}_2\text{Cl}$ |
| 5. | Bromomethane (Methyl Bromide) | CH_3Br |
| 6. | Chlorinated Phenols | |
| 7. | Chloroprene | $\text{H}_2\text{C} : \text{CHCCl} : \text{CH}_2$ |
| 8. | Cresol | $\text{CH}_3\text{C}_6\text{H}_4\text{OH}$ |
| 9. | Dialkyl Nitrosamines | |
| 10. | 1,4 - Dioxane | $\text{OCH}_2\text{CH}_2\text{OCH}_2\text{CH}_2$ |
| 11. | Epichlorohydrin | $\text{CH}_2\text{OCHCH}_2\text{Cl}$ |
| 12. | Ethylene Oxide | $\text{CH}_2\text{CH}_2\text{O}$ |
| 13. | Formaldehyde | HCHO |
| 14. | Hexachlorocyclopentadiene | C_5Cl_6 |
| 15. | Nitrobenzene | $\text{C}_6\text{H}_5\text{NO}_2$ |
| 16. | Phenol | $\text{C}_6\text{H}_5\text{OH}$ |
| 17. | Phosgene | COCl_2 |
| 18. | Polychlorinated Dibenzo-P-Dioxin | |
| 19. | Polychlorinated Dibenzo Furan | |
| 20. | Polychlorinated Biphenols | |
| 21. | Polynuclear Aromatic Hydrocarbons | |
| 22. | Propylene Oxide | $\text{CH}_2\text{-CH-CH}_3$ |
| 23. | Tetrahydrothiophene | $\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{S}$ |
| 24. | Thiophene | CHCHCHCHS |

(Amended March 17, 2000)

Attachment B

TITLE 27. Environmental Protection

Division 2. Solid Waste

Subdivision 1. Consolidated Regulations for Treatment, Storage, Processing or Disposal of Solid

Chapter 3. Criteria for All Waste Management Units, Facilities, and Disposal Sites
Subchapter S. Closure and Post-Closure Maintenance

Article 2. Closure and Post-Closure Maintenance Standards for Disposal Sites and
Landfills

§21140. Section CIWMB – Final Cover. (T14:§17773)

- (a) The final cover shall function with minimum maintenance and provide waste containment to protect public health and safety by controlling at a minimum, vectors, fire, odor, litter and landfill gas migration. The final cover shall also be compatible with postclosure land use.
- (b) In proposing a final cover design meeting the requirements under §21090, the owner or operator shall assure that the proposal meets the requirements of this section. Alternative final cover designs shall meet the performance requirements of ¶(a) and, for MSWLF units, 40 CFR 258.60(b); shall be approved by the enforcement agency for aspects of ¶(a).
- (c) The EA may require additional thickness, quality, and type of final cover depending on, but not limited to the following:
- (1) a need to control landfill gas emissions and fires;
 - (2) the future reuse of the site; and
 - (3) provide access to all areas of the site as needed for inspection of monitoring and control facilities, etc.

NOTE

Authority cited: Sections 40502 and 43020, Public Resources Code; and Section 66796.22 (d), Government Code. Reference: Sections 43021 and 43103, Public Resources Code; and Section 66796.22(d), Government Code.

HISTORY

1. New section filed 6-18-97; operative 7-18-97 (Register 97, No. 25).

Attachment C

TITLE 27. Environmental Protection

Division 2. Solid Waste

Subdivision 1. Consolidated Regulations for Treatment, Storage, Processing or Disposal of Solid

Chapter 3. Criteria for All Waste Management Units, Facilities, and Disposal Sites

Subchapter 2. Siting and Design

Article 2. SWRCB -- Waste Classification and Management

§20200. SWRCB -- Applicability and Classification Criteria. (CIS: §2520)

(a) Concept--This article contains a waste classification system which applies to solid wastes that cannot be discharged directly or indirectly to waters of the state and which therefore must be discharged to waste management units (Units) for treatment, storage, or disposal in accordance with the requirements of this division. Wastes which can be discharged directly or indirectly (*e.g., by percolation*) to waters of the state under effluent or concentration limits that implement applicable water quality control plans (*e.g., municipal or industrial effluent or process wastewater*) are not subject to the SWRCB-promulgated provisions of this division. This waste classification system shall provide the basis for determining which wastes may be discharged at each class of Unit. Waste classifications are based on an assessment of the potential risk of water quality degradation associated with each category of waste.

(1) The waste classifications in this article shall determine where the waste can be discharged unless the waste does not consist of or contain municipal solid waste (MSW) and the discharger establishes to the satisfaction of the RWQCB that a particular waste constituent or combination of constituents presents a lower risk of water quality degradation than indicated by classification according to this article.

(2) Discharges of wastes identified in §20210 or §20220 of this article shall be permitted only at Units which have been approved and classified by the RWQCB in accordance with the criteria established in Article 3 of this subchapter, and for which WDRs have been prescribed or waived pursuant to Article 4, Subchapter 3, Chapter 4 of this subdivision (§21710 et seq.). Table 2.1 (of this article) presents a summary of discharge options for each waste category.

(b) Dedicated Units/Cells For Certain Wastes--The following wastes shall be discharged only at dedicated Units [or dedicated landfill cells (*e.g., ash monofill cell*)] which are designed and constructed to contain such wastes:

(1) wastes which cause corrosion or decay, or otherwise reduce or impair the integrity of containment structures;

(2) wastes which, if mixed or commingled with other wastes can produce a violent reaction (including heat, pressure, fire or explosion), can produce toxic byproducts, or can produce any reaction product(s) which:

(A) requires a higher level of containment;

(B) is a restricted waste; or

(C) impairs the integrity of containment structures.

(c) Waste Characterization--Dischargers shall be responsible for accurate characterization of

Alternative Compliance Plan For Bradley Landfill, Issue No. 3

Rule 1150.1 (Cont.)

(Amended March 17, 2000)

wastes, including determinations of whether or not wastes will be compatible with containment features and other wastes at a Unit under ¶(b), and whether or not wastes are required to be managed as hazardous wastes under Chapter 11 of Division 4.5 of Title 22 of this code.

(d) Management of Liquids at Landfills and Waste Piles--The following requirements apply to discharges of liquids at Class II waste piles and at Class II and Class III landfills, except as otherwise required for MSW landfills by more-stringent state and federal requirements under SWRCB Resolution No. 93-62 section 2908 of Title 23 of this Code (see 40CFR258.28) [Note: see also definitions of "leachate" and "landfill gas condensate" in §20164]:

(1) [Reserved.];

(2) wastes containing free liquids shall not be discharged to a Class II waste pile. Any waste that contains liquid in excess of the moisture-holding capacity of the waste in the Class II landfill, or which contains liquid in excess of the moisture-holding capacity as a result of waste management operations, compaction, or settlement shall only be discharged to a surface impoundment or to another Unit with containment features equivalent to a surface impoundment; and

(3) liquids or semi-solid waste (i.e., waste containing less than 50 percent solids, by weight), other than dewatered sewage or water treatment sludge as described in §20220(c), shall not be discharged to Class III landfills. Exceptions may be granted by the RWQCB if the discharger can demonstrate that such discharge will not exceed the moisture-holding capacity of the landfill, either initially or as a result of waste management operations, compaction, or settlement, so long as such discharge is not otherwise prohibited by applicable state or federal requirements.

APPENDIX B

SUBSURFACE PERIMETER PROBE MONITORING

- Field Sheets
- Laboratory Analysis
- Sample Chain-of-Custody
- Instrumentation Calibration

MONTHLY READING

BRADLEY LANDFILL GAS PROBE READING

EQUIPMENT USED: Landtec Gem ²⁰⁰⁰ (Serial No. 07252)

BAROMETRIC (before): 29.01
BAROMETRIC (after): 29.06

TECHNICIAN: PAUL BOUATO

DATE: 1/24/05

DATE: _____

DATE: _____

START TIME: 8:14

START TIME: _____

START TIME: _____

FINISH TIME: 14:32

FINISH TIME: _____

FINISH TIME: _____

| PROBE ID | STATIC PRESSURE (PSI) | ORP (mV) |
|----------|-----------------------|----------|
| W-1S | +0.0 | 0.0 |
| W-1M | +0.0 | 0.0 |
| W-1D | -0.5 | 0.0 |
| W-2A | +0.0 | 0.0 |
| W-2B | -0.1 | 0.0 |
| W-3S | +0.0 | 0.0 |
| W-3M | -0.1 | 0.0 |
| W-3D | -0.2 | 0.0 |
| W-4 | +0.0 | 0.0 |
| W-5S | +0.0 | 0.0 |
| W-5M | +0.2 | 0.0 |
| W-5D | +0.0 | 0.0 |
| W-6 | +0.0 | 25.8 |
| W-7S | -0.4 | 0.0 |
| W-7M | -0.7 | 0.0 |
| W-7D | -0.2 | 0.0 |
| W-8 | +0.0 | 0.0 |
| W-9A | +0.0 | 0.0 |
| W-9B | -0.1 | 0.0 |
| W-10S | -0.1 | 0.0 |
| W-10M | -0.2 | 0.0 |
| W-10D | -0.4 | 0.0 |
| W-11 | +0.0 | 0.0 |
| W-12S | +0.0 | 0.0 |
| W-12M | +0.0 | 0.0 |
| W-12D | +0.0 | 0.0 |
| W-13 | +0.1 | 0.0 |
| W-14S | +0.0 | 22.7 |
| W-14M | -0.1 | 0.0 |
| W-14D | +0.1 | 0.0 |

| PROBE ID | STATIC PRESSURE (PSI) | ORP (mV) |
|----------|-----------------------|----------|
| S-1A | | |
| S-2B | | |
| S-3S | -0.2 | 0.0 |
| S-3M1 | +0.0 | 0.0 |
| S-3M2 | +0.0 | 0.0 |
| S-3D | -0.2 | 0.0 |
| S-4 | -0.3 | 0.0 |
| S-5 | -0.2 | 0.0 |
| S-6S | -0.3 | 0.0 |
| S-6M1 | -0.3 | 0.0 |
| S-6M2 | -0.2 | 0.0 |
| S-6D | -0.2 | 0.0 |
| S-7 | +0.0 | 0.0 |
| S-8 | +0.1 | 0.0 |
| S-9S-R | -0.3 | 0.1 |
| S-9M1-R | -0.3 | 0.2 |
| S-9M2-R | -0.3 | 0.0 |
| S-9D-R | -0.2 | 0.1 |
| S-10R | +0.0 | 0.0 |
| S-11R | +0.1 | 0.0 |
| S-12 | -0.2 | 0.0 |

| PROBE ID | STATIC PRESSURE (PSI) | ORP (mV) |
|----------|-----------------------|----------|
| E-1 | | |
| E-2S | | |
| E-2M | | |
| E-2D | | |
| E-3 | | |
| E-4 | | |
| E-5S | | |
| E-5M | | |
| E-5D | | |
| E-6 | | |
| E-7 | | |
| E-8S | | |
| E-8M | | |
| E-8D | | |
| E-9 | | |
| E-10 | | |
| E-11S-R | | |
| E-11M-R | | |
| E-11D-R | | |
| E-12 | | |
| E-13 | | |
| E-14S | | |
| E-14M | | |
| E-14D | | |

Monitoring Protocol:

Probe monitoring is conducted in accordance with SCAQMD Rule 1150.1, Attachment A, Section 1.3.1. Prior to sampling each probe is evacuated until the Total Organic Compound concentration remains constant for 30 seconds.

Comments:

²⁰⁰⁰ GEM ^{15.0%} CALIBRATED TO 2.5% CH₄

* Submitted for laboratory analyses.

MONTHLY READING

BRADLEY LANDFILL GAS PROBE READING

EQUIPMENT USED: Landeco Gem 555 (Serial No. 07252)

BAROMETRIC (before): 28.98

TECHNICIAN: RAUL BONGATO

BAROMETRIC (after): 28.94

DATE: _____

DATE: _____

DATE: 1/25/05

START TIME: _____

START TIME: _____

START TIME: 14:25

FINISH TIME: _____

FINISH TIME: _____

FINISH TIME: 15:29

| PROBE ID | READING | DATE |
|----------|---------|------|
| W-1S | | |
| W-1M | | |
| W-1D | | |
| W-2A | | |
| W-2B | | |
| W-3S | | |
| W-3M | | |
| W-3D | | |
| W-4 | | |
| W-5S | | |
| W-5M | | |
| W-5D | | |
| W-6 | | |
| W-7S | | |
| W-7M | | |
| W-7D | | |
| W-8 | | |
| W-9A | | |
| W-9B | | |
| W-10S | | |
| W-10M | | |
| W-10D | | |
| W-11 | | |
| W-12S | | |
| W-12M | | |
| W-12D | | |
| W-13 | | |
| W-14S | | |
| W-14M | | |
| W-14D | | |

| PROBE ID | READING | DATE |
|----------|---------|------|
| S-1A | | |
| S-2B | | |
| S-3S | | |
| S-3M1 | | |
| S-3M2 | | |
| S-3D | | |
| S-4 | | |
| S-5 | | |
| S-6S | | |
| S-6M1 | | |
| S-6M2 | | |
| S-6D | | |
| S-7 | | |
| S-8 | | |
| S-9S-R | | |
| S-9M1-R | | |
| S-9M2-R | | |
| S-9D-R | | |
| S-10R | | |
| S-11R | | |
| S-12 | | |

| PROBE ID | READING | DATE |
|----------|---------|------|
| E-1 | +0.0 | 0.0 |
| E-2S | +0.0 | 0.0 |
| E-2M | +1.5 | 0.0 |
| E-2D | +0.4 | 0.0 |
| E-3 | +0.0 | 0.0 |
| E-4 | +0.0 | 0.0 |
| E-5S | -0.5 | 0.0 |
| E-5M | -0.5 | 0.0 |
| E-5D | -0.1 | 0.0 |
| E-6 | -0.1 | 0.0 |
| E-7 | +0.0 | 0.0 |
| E-8S | +3.7 | 0.0 |
| E-8M | +0.2 | 0.0 |
| E-8D | +0.9 | 49.0 |
| E-9 | +0.0 | 0.0 |
| E-10 | +0.0 | 0.0 |
| E-11S-R | +0.0 | 0.0 |
| E-11M-R | +0.0 | 0.0 |
| E-11D-R | +0.0 | 0.0 |
| E-12 | +0.0 | 0.0 |
| E-13 | -0.2 | 0.0 |
| E-14S | -0.2 | 0.0 |
| E-14M | -0.2 | 0.0 |
| E-14D | +0.1 | 0.0 |

Monitoring Protocol:

Probe monitoring is conducted in accordance with SCAQMD Rule 1150.1, Attachment A, Section 1.3.1. Prior to sampling each probe is evacuated until the Total Organic Compound concentration remains constant for 30 seconds.

Comments:

GEM-500 CALIBRATED TO 2.5% CH₄

Submitted for laboratory analyses.

BRADLEY LANDFILL GAS PROBE READINGS

EQUIPMENT USED: Landtec GEM 2000 (Serial No. 07406)
Calibrated to 15.0% CH₄.

TECHNICIAN: RAUL BONCATO

BAROMETRIC (before): 29.23

BAROMETRIC (after): 29.10

DATE: 2/28/05

START TIME: 8:50

FINISH TIME: 15:03

| Probe No. | Static Pres. (in w.c.) | TOC (% CH ₄) | Action Level |
|-----------|------------------------|--------------------------|--------------|
| W-1S | -0.2 | 0.0 | 1 |
| W-1M | -0.2 | 0.0 | 1 |
| W-1D | +0.0 | 0.0 | 1 |
| W-2A | +0.0 | 0.0 | 1 |
| W-2B | +0.0 | 0.0 | 1 |
| W-3S | +0.0 | 0.0 | 1 |
| W-3M | +0.0 | 0.0 | 1 |
| W-3D | -0.4 | 0.0 | 1 |
| W-4 | +0.0 | 0.0 | 1 |
| W-5S | -0.1 | 0.0 | 1 |
| W-5M | -0.4 | 0.0 | 1 |
| W-5D | -0.4 | 0.0 | 1 |
| W-6 | +0.0 | 0.0 | 1 |
| W-7S | -0.3 | 0.0 | 1 |
| W-7M | -0.3 | 0.0 | 1 |
| W-7D | -0.1 | 0.0 | 1 |
| W-8 | +0.1 | 0.0 | 1 |
| W-9A | +0.1 | 0.0 | 1 |
| W-9B | +0.0 | 4.3 | 1 |
| W-10S | +0.1 | 0.0 | 1 |
| W-10M | +0.3 | 0.0 | 1 |
| W-10D | +0.0 | 0.0 | 1 |
| W-11 | +0.1 | 0.0 | 1 |
| W-12S | +0.1 | 0.0 | 1 |
| W-12M | +0.1 | 0.0 | 1 |
| W-12D | +0.1 | 0.0 | 1 |
| W-13 | +0.1 | 0.0 | 1 |
| W-14S | +0.1 | 77.7 | 4 |
| W-14M | +0.0 | 0.0 | 1 |
| W-14D | -0.4 | 0.0 | 1 |

| Probe No. | Static Pres. (in w.c.) | TOC (% CH ₄) | Action Level |
|-----------|------------------------|--------------------------|--------------|
| S-3S | | | |
| S-3M1 | NOT SAFELY ACCESSIBLE | | |
| S-3M2 | | | |
| S-3D | | | |
| S-4 | +0.0 | 0.0 | 1 |
| S-5 | +0.0 | 0.0 | 1 |
| S-6S | +0.0 | 0.0 | 1 |
| S-6M1 | +0.0 | 0.0 | 1 |
| S-6M2 | -0.1 | 0.0 | 1 |
| S-6D | +0.0 | 0.0 | 1 |
| S-7 | +0.0 | 0.0 | 1 |
| S-8 | +0.1 | 0.0 | 1 |
| S-9S-R | +0.1 | 22.5 | 4 |
| S-9M1-R | +0.1 | 13.4 | 4 |
| S-9M2-R | +0.2 | 10.0 | 4 |
| S-9D-R | +0.4 | 0.9 | 1 |
| S-10R | +0.0 | 62.0 | 4 |
| S-11R | +0.0 | 0.2 | 1 |
| S-12 | +0.0 | 0.1 | 1 |

| Probe No. | Pres. (in w.c.) | TOC (% CH ₄) | Action Level |
|-----------|-----------------|--------------------------|--------------|
| E-1 | +0.0 | 0.0 | 1 |
| E-2S | +0.0 | 0.0 | 1 |
| E-2M | +0.4 | 0.0 | 1 |
| E-2D | -1.6 | 0.2 | 1 |
| E-3 | -1.4 | 0.0 | 1 |
| E-4 | +0.0 | 0.0 | 1 |
| E-5S | +0.0 | 0.0 | 1 |
| E-5M | +0.0 | 0.0 | 1 |
| E-5D | +0.4 | 0.0 | 1 |
| E-6 | -1.5 | 0.0 | 1 |
| E-7 | +0.0 | 0.0 | 1 |
| E-8S | +7.3 | 0.0 | 1 |
| E-8M | -0.1 | 0.0 | 1 |
| E-8D | +0.4 | 61.1 | 4 |
| E-9+ | +0.0 | 0.0 | 1 |
| E-10 | -0.4 | 0.0 | 1 |
| E-11S-R | +0.0 | 0.0 | 1 |
| E-11M-R | +0.1 | 0.0 | 1 |
| E-11D-R | +0.7 | 0.0 | 1 |
| E-12 | +0.0 | 0.0 | 1 |
| E-13 | +0.0 | 0.0 | 1 |
| E-14S | +0.1 | 0.0 | 1 |
| E-14M | +0.1 | 1.5 | 1 |
| E-14D | +0.4 | 44.8 | 4 |

- Action Levels:
- (1) All probes monitored show methane less than 3%. Fax to Ann Jones.
 - (2) Any probe showing methane concentrations equal or greater than 3% and less than 5%. (see instructions on reverse)
 - (3) Any probe containing methane concentrations of 5% or greater. (see instructions on reverse)
 - (4) Any probe exceeding 5% for 3 or more days (see instructions on reverse)

Monitoring Protocol: Probe monitoring is conducted in accordance with SCAQMD Rule 1150.1, Attachment A, Section 1.3.1. Prior to sampling each probe is evacuated until the Total Organic Compound concentrations remains constant for 30 seconds.

All probes at Action Level (1), No action items required:

Yes ☐ No ☒

Technician: Normal Smith

Date: 2/28/05

(If "No", please see attached Action Taken and Notification sheet)

BRADLEY LANDFILL GAS/PROBE READINGS

EQUIPMENT USED: Landtec GEM 2000 (Serial No. 07252)
Calibrated to 15.0% CH₄.

BAROMETRIC (before): 29.04

TECHNICIAN: RAUL BONGATO

BAROMETRIC (after): 29.03

DATE: 3/30/05

START TIME: 12:23

FINISH TIME 15:13

| Probe No. | Static Pres. (in w.c.) | TOC (% CH ₄) | Action Level |
|-----------|------------------------|--------------------------|--------------|
| W-1S | | | |
| W-1M | | | |
| W-1D | | | |
| W-2A | +0.0 | 0.0 | 1 |
| W2B | | | |
| W-3S | | | |
| W-3M | +0.0 | 0.0 | 1 |
| W-3D | +0.2 | 0.0 | 1 |
| W-4 | | | |
| W-5S | | | |
| W-5M | -0.2 | 0.0 | 1 |
| W-5D | +0.0 | 0.0 | 1 |
| W-6 | +0.0 | 0.0 | 1 |
| W-7S | | | |
| W-7M | -0.3 | 0.0 | 1 |
| W-7D | +0.0 | 0.0 | 1 |
| W-8 | | | |
| W-9A | -0.1 | 0.0 | 1 |
| W-9B | +0.0 | 0.0 | 1 |
| W-10S | | | |
| W-10M | +0.0 | 0.0 | 1 |
| W10D | -0.3 | 0.0 | 1 |
| W-11 | | | |
| W-12S | | | |
| W12M | +0.1 | 0.0 | 1 |
| W-12D | +0.0 | 0.0 | 1 |
| W-13 | +0.0 | 0.0 | 1 |
| W-14S | +0.0 | 77.9 | 4 |
| W-14M | -0.2 | 0.0 | 1 |
| W-14D | -0.6 | 0.0 | 1 |

[illegible][illegible]

- Action Levels:**
- (1) All probes monitored show methane less than 3%. Fax to Ann Jones.
 - (2) Any probe showing methane concentrations equal or greater than 3% and less than 5%. (see instructions on reverse)
 - (3) Any probe containing methane concentrations of 5% or greater. (see instructions on reverse)
 - (4) Any probe exceeding 5% for 3 or more days (see instructions on reverse)

Monitoring Protocol: Probe monitoring is conducted in accordance with SCAQMD Rule 1150.1, Attachment A, Section 1.3.1. Prior to sampling each probe is evacuated until the Total Organic Compound concentrations remains constant for 30 seconds.

All probes at Action Level (1), No action items required: Yes / No

Technician:

Date: 3/30/05

(If "No", please see attached Action Taken and Notification sheet)

NOTE: >>> - 100% AND OVER



AtmAA Inc.

23917 Craftsman Rd., Calabasas, CA 91302 • (818) 223-3277 • FAX (818) 223-8250

LABORATORY ANALYSIS REPORT

environmental consultants
laboratory services

SCAQMD Rule 1150.1 Components Analysis in Probe Tedlar Bag Sample

Report Date: February 1, 2005

Client: Shaw Environmental

Project Location: Bradley Landfill

Date Received: January 21, 2005

Date Analyzed: January 21, 2005

AtmAA Lab No.: 00215-4

Sample I.D.: Probe E-8D

BL-005

| Components | (Concentration in %,v) |
|----------------|------------------------|
| Nitrogen | 6.43 |
| Oxygen | 0.44 |
| Methane | 55.6 |
| Carbon dioxide | 36.1 |

| | (Concentration in ppmv) |
|------------------|-------------------------|
| TGNMO | 549 |
| Hydrogen sulfide | <0.5 |

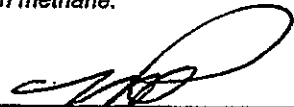
| | (Concentration in ppbv) |
|-----------------------|-------------------------|
| Benzene | 106 |
| Benzylchloride | <40 |
| Chlorobenzene | <30 |
| Dichlorobenzenes* | <30 |
| 1,1-dichloroethane | 153 |
| 1,2-dichloroethane | <20 |
| 1,1-dichloroethylene | <30 |
| Dichloromethane | <30 |
| 1,2-dibromoethane | <30 |
| Perchloroethylene | 33.9 |
| Carbon tetrachloride | <30 |
| Toluene | 725 |
| 1,1,1-trichloroethane | <20 |
| Trichloroethene | <20 |
| Chloroform | <20 |
| Vinyl chloride | 3350 |
| m+p-xylenes | 673 |
| o-xylene | 230 |

The accuracy of permanent gas analysis by TCD/GC is +/- 2%, actual results are reported.

The reported oxygen concentration includes any argon present in the sample. Calibration is based on a standard atmosphere containing 20.95% oxygen and 0.93% argon.

TGNMO is total gaseous non-methane organics measured and reported as ppm methane.

* total amount containing meta, para, and ortho isomers


Michael L. Porter
Laboratory Director



AtmAA Inc.

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LABORATORY ANALYSIS REPORT

environmental consultants
laboratory services

Speciated Hydrocarbons Analysis in Tedlar Bag Samples

Report Date: January 6, 2005
Client: Shaw Environmental
Site: Bradley Landfill
Project No.: 108341.01

Date Received: January 5, 2005
Date Analyzed: January 5, 2005

ANALYSIS DESCRIPTION

Hydrocarbon Speciation analysis was performed by flame ionization detection/gas chromatography (FID/GC), modified EPA-18.

AtmAA Lab No.: 00055-16
Sample ID: BL-020
P W14S
(Concentration in ppmv, component)

Methane

344000

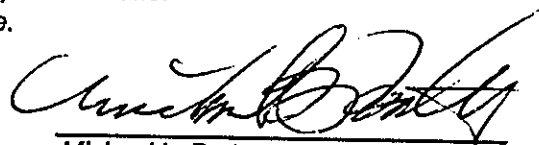
non-methane hydrocarbons
analysis by carbon
number grouping

(Concentration in ppmv, as component)

| | |
|-----|-------|
| C2 | 11359 |
| C3 | 1276 |
| C4 | 136.5 |
| C5 | 5.06 |
| C6 | <0.6 |
| C7 | <0.6 |
| C8 | <0.6 |
| C9 | 0.82 |
| C10 | <0.6 |
| C11 | <0.6 |

| | |
|-------|-------|
| TNMNE | 4407 |
| TNMHC | 27125 |

TNMNE - total non-methane, non-ethane, hydrocarbons as ppmv methane.
TNMHC - total non-methane hydrocarbons as ppmv methane.


Michael L. Porter
Laboratory Director

Calculated values for Specific Volume, BTU and F (factor)

Report Date: January 6, 2005
 Client: Shaw Environmental
 Project Location: Bradley Landfill
 Date Received: January 5, 2005
 Date Analyzed: January 5, 2005
 AtmAA Lab No.: 00055-16, probe W14S

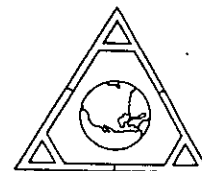
Specific volume, BTU, and F factor are calculated using laboratory analysis results for methane, carbon dioxide, nitrogen, oxygen, TGNMO, and sulfur compounds in equations that include assumed values for the specific volume of gases (CH₄, CO₂, N₂, O₂, Ar, and (CH₂)_n). The specific volume of gases were taken from the Scott Speciality Gases catalogue, 2001, and represents as is gas at 60° F and 1 atm. The F factor is calculated according to the equation in ASTM D-3588.B89

| Component | Mole % | Wt % | C,H,O,N,S, Wt. % |
|---------------------|--------|--------|------------------|
| Methane | 34.40 | 22.08 | Carbon 21.67 |
| Carbon dioxide | 7.89 | 13.92 | Hydrogen 5.84 |
| Nitrogen | 51.50 | 57.86 | Oxygen 14.40 |
| Oxygen | 3.33 | 4.27 | Nitrogen 57.86 |
| Argon | 0.148 | 0.237 | Argon 0.24 |
| Ethane | 1.14 | 1.37 | Sulfur 0.00 |
| Propane | 0.13 | 0.23 | |
| Butane | 0.014 | 0.032 | |
| Specific Volume | | 14.909 | |
| BTU/ft ³ | | 371 | |
| BTU/ lb. | | 5535 | |
| F (factor) | | 10099 | |

dry gas at 60° F, 1 atm, where CH₄-1010, Ethane-1769.7, Propane-2516.1, & Butane-3251.9/cu.ft.

| Component | Specific volume reference values * |
|----------------|---------------------------------------|
| Methane | 23.35 (ft ³ /lb) |
| Carbon dioxide | 8.59 |
| Nitrogen | 13.54 |
| Oxygen | 11.87 |
| Argon | 9.52 |
| Ethane | 12.56 |
| Propane | 8.34 |
| Butane | 6.28 |

* reference, Scott Specialty Gases Catalogue, 2001 adjusted to 60°F



LABORATORY ANALYSIS REPORT

SCAQMD Rule 1150.1 Components Analysis in Probe Tedlar Bag Sample

Report Date: February 14, 2005
 Client: Shaw Environmental
 Project Location: Bradley Landfill
 Date Received: January 31, 2005
 Date Analyzed: January 31-February 2, 2005

AtmAA Lab No.: 00315-1
 Sample I.D.: Probe W6
 BL-010

| Components | (Concentration in %,v) |
|----------------|------------------------|
| Nitrogen | 43.7 |
| Oxygen | 0.68 |
| Methane | 30.6 |
| Carbon dioxide | 24.2 |

| | (Concentration in ppmv) |
|------------------|-------------------------|
| TGNMO | 293 |
| Hydrogen sulfide | <0.5 |

| | (Concentration in ppbv) |
|-----------------------|-------------------------|
| Benzene | 122 |
| Benzylchloride | <40 |
| Chlorobenzene | <30 |
| Dichlorobenzenes* | <30 |
| 1,1-dichloroethane | 58.2 |
| 1,2-dichloroethane | <20 |
| 1,1-dichloroethylene | 34.6 |
| Dichloromethane | <30 |
| 1,2-dibromoethane | <30 |
| Perchloroethylene | 412 |
| Carbon tetrachloride | <30 |
| Toluene | 35.4 |
| 1,1,1-trichloroethane | <20 |
| Trichloroethene | 83.6 |
| Chloroform | <20 |
| Vinyl chloride | 1740 |
| m+p-xylenes | 281 |
| o-xylene | 36.6 |

The accuracy of permanent gas analysis by TCD/GC is +/- 2%, actual results are reported.

The reported oxygen concentration includes any argon present in the sample. Calibration is based on a standard atmosphere containing 20.95% oxygen and 0.93% argon.

TGNMO is total gaseous non-methane organics measured and reported as ppm methane.

* total amount containing meta, para, and ortho isomers

Michael L. Porter
 Laboratory Director

QUALITY ASSURANCE SUMMARY
(Repeat Analyses)

Project Location: Bradley Landfill
Date Received: January 31, 2005
Date Analyzed: January 31-February 2, 2005

| Components | Sample ID | Repeat Analysis | | Mean Conc. | % Diff. From Mean |
|-------------------------|-----------|------------------------|--------|------------|-------------------|
| | | Run #1 | Run #2 | | |
| | | (Concentration in %,v) | | | |
| Nitrogen | Probe W6 | 43.7 | 43.7 | 43.7 | 0.0 |
| Oxygen | Probe W6 | 0.67 | 0.69 | 0.68 | 1.5 |
| Methane | Probe W6 | 30.7 | 30.5 | 30.6 | 0.33 |
| Carbon dioxide | Probe W6 | 24.3 | 24.2 | 24.2 | 0.21 |
| (Concentration in ppmv) | | | | | |
| TGNMO | No Repeat | | | | |
| Hydrogen sulfide | Probe W6 | <0.5 | <0.5 | --- | --- |
| (Concentration in ppbv) | | | | | |
| Benzene | Probe W6 | 123 | 122 | 122 | 0.41 |
| Benzylchloride | Probe W6 | <40 | <40 | --- | --- |
| Chlorobenzene | Probe W6 | <30 | <30 | --- | --- |
| Dichlorobenzenes | Probe W6 | <30 | <30 | --- | --- |
| 1,1-dichloroethane | Probe W6 | 57.5 | 59.0 | 58.2 | 1.3 |
| 1,2-dichloroethane | Probe W6 | <20 | <20 | --- | --- |
| 1,1-dichloroethylene | Probe W6 | 35.5 | 33.6 | 34.6 | 2.7 |
| Dichloromethane | Probe W6 | <30 | <30 | --- | --- |
| 1,2-dibromoethane | Probe W6 | <30 | <30 | --- | --- |
| Perchloroethylene | Probe W6 | 418 | 406 | 412 | 1.4 |
| Carbon tetrachloride | Probe W6 | <30 | <30 | --- | --- |
| Toluene | Probe W6 | 35.5 | 35.3 | 35.4 | 0.28 |

QUALITY ASSURANCE SUMMARY
 (Repeat Analyses)
 (continued)

| Components | Sample ID | Repeat Analysis | | Mean Conc. | % Diff. From Mean |
|-----------------------|-----------|-------------------------|--------|------------|-------------------|
| | | Run #1 | Run #2 | | |
| | | (Concentration in ppbv) | | | |
| 1,1,1-trichloroethane | Probe W6 | <20 | <20 | --- | --- |
| Trichloroethene | Probe W6 | 84.1 | 83.0 | 83.6 | 0.66 |
| Chloroform | Probe W6 | <20 | <20 | --- | --- |
| Vinyl chloride | Probe W6 | 1740 | 1730 | 1740 | 0.29 |
| m+p-xylenes | Probe W6 | 284 | 278 | 281 | 1.1 |
| o-xylene | Probe W6 | 37.3 | 35.9 | 36.6 | 1.9 |

One Tedlar bag sample, laboratory number 00315-1, was analyzed for SCAQMD Rule 1150.1 components, permanent gases, and total gaseous non-methane organics (TGNMO). Agreement between repeat analyses is a measure of precision and is shown above in the column "% Difference from Mean". Repeat analyses are an important part of AtmAA's quality assurance program. The average % Difference from Mean for 13 repeat measurements from the one Tedlar bag sample is 0.93%.

LABORATORY ANALYSIS REPORT

Speciated Hydrocarbons Analysis in Tedlar Bag Samples

Report Date: February 14, 2005
 Client: Shaw Environmental
 Project Location: Bradley Landfill
 Client Project No.: 108341.01

Date Received: January 31, 2005
 Date Analyzed: February 2, 2005

ANALYSIS DESCRIPTION

Hydrocarbon speciation analysis was performed by flame ionization detection/gas chromatography (FID/GC), modified EPA-18.

| | | | | |
|--------------------------|---------------------------------|----------|--|--|
| AtmAA Lab No.: | 00315-1 | (repeat) | | |
| Sample ID: | BL-010 | BL-010 | | |
| | Probe W6 | Probe W6 | | |
| | (concentration, ppmv component) | | | |
| Methane | 307000 | 305000 | | |
| non-methane hydrocarbons | | | | |
| analysis by carbon | | | | |
| <u>number grouping</u> | | | | |
| C2 | 0.722 | | | |
| C3 | 7.378 | | | |
| C4 | 3.003 | | | |
| C5 | 0.285 | | | |
| C6 | 1.407 | | | |
| C7 | 2.936 | | | |
| C8 | 9.017 | | | |
| C9 | 11.016 | | | |
| C10 | 5.222 | | | |
| C11 | 0.338 | | | |
| C12 | <0.05 | | | |
| TNMNE | 292 | | | |
| TNMHC | 293 | | | |

TNMNE - total non-methane, non-ethane, hydrocarbons as ppmv methane.

TNMHC - total non-methane hydrocarbons as ppmv methane.

Michael L. Porter
 Laboratory Director



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LABORATORY ANALYSIS REPORT

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SCAQMD Rule 1150.1 Components Analysis in Probe Tedlar Bag Sample

Report Date: January 7, 2005

Client: Shaw Environmental

Project Location: Bradley Landfill

Date Received: January 5, 2005

Date Analyzed: January 5, 2005

AtmAA Lab No.: 00055-16
Sample I.D.: Probe W14S
BL-020

| Components | (Concentration in %,v) |
|----------------|------------------------|
| Nitrogen | 51.5 |
| Oxygen | 3.48 |
| Methane | 34.4 |
| Carbon dioxide | 7.88 |

| | (Concentration in ppmv) |
|------------------|-------------------------|
| TGNMO | 4410 |
| Hydrogen sulfide | <0.5 |

| | (Concentration in ppbv) |
|-----------------------|-------------------------|
| Benzene | <20 |
| Benzylchloride | <40 |
| Chlorobenzene | <30 |
| Dichlorobenzenes* | <30 |
| 1,1-dichloroethane | <20 |
| 1,2-dichloroethane | <20 |
| 1,1-dichloroethylene | <30 |
| Dichloromethane | <30 |
| 1,2-dibromoethane | <30 |
| Perchloroethylene | <20 |
| Carbon tetrachloride | <20 |
| Toluene | <20 |
| 1,1,1-trichloroethane | <20 |
| Trichloroethene | <20 |
| Chloroform | <20 |
| Vinyl chloride | 48.4 |
| m+p-xylenes | <30 |
| o-xylene | <20 |

The accuracy of permanent gas analysis by TCD/GC is +/- 2%, actual results are reported.

The reported oxygen concentration includes any argon present in the sample. Calibration is based on a standard atmosphere containing 20.95% oxygen and 0.93% argon.

TGNMO is total gaseous non-methane, non-ethane, organics measured and reported as ppm methane.

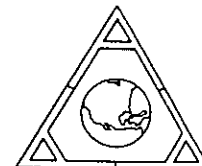
* total amount containing meta, para, and ortho isomers


Michael L. Porter
Laboratory Director

QUALITY ASSURANCE SUMMARY
(Repeat Analyses)

Project Location: Bradley Landfill
Date Received: January 5, 2005
Date Analyzed: January 5, 2005

| Components | Sample ID | Repeat Analysis | | Mean Conc. | % Diff. From Mean |
|-------------------------|------------|-----------------|--------|------------|-------------------|
| | | Run #1 | Run #2 | | |
| (Concentration in %,v) | | | | | |
| Nitrogen | Probe W14S | 51.5 | 51.5 | 51.5 | 0.0 |
| Oxygen | Probe W14S | 3.46 | 3.49 | 3.48 | 0.43 |
| Methane | Probe W14S | 34.5 | 34.3 | 34.4 | 0.29 |
| Carbon dioxide | Probe W14S | 7.90 | 7.87 | 7.88 | 0.19 |
| (Concentration in ppmv) | | | | | |
| TGNMO | No Repeat | | | | |
| Hydrogen sulfide | Probe W14S | <0.5 | <0.5 | --- | --- |
| (Concentration in ppbv) | | | | | |
| Benzene | Probe W14S | <20 | <20 | --- | --- |
| Benzylchloride | Probe W14S | <40 | <40 | --- | --- |
| Chlorobenzene | Probe W14S | <30 | <30 | --- | --- |
| Dichlorobenzenes | Probe W14S | <30 | <30 | --- | --- |
| 1,1-dichloroethane | Probe W14S | <20 | <30 | --- | --- |
| 1,2-dichloroethane | Probe W14S | <20 | <20 | --- | --- |
| 1,1-dichloroethylene | Probe W14S | <30 | <30 | --- | --- |
| Dichloromethane | Probe W14S | <30 | <30 | --- | --- |
| 1,2-dibromoethane | Probe W14S | <30 | <30 | --- | --- |
| Perchloroethylene | Probe W14S | <20 | <20 | --- | --- |
| Carbon tetrachloride | Probe W14S | <20 | <30 | --- | --- |
| Toluene | Probe W14S | <20 | <20 | --- | --- |



QUALITY ASSURANCE SUMMARY
(Repeat Analyses)
(continued)

| Components | Sample ID | Repeat Analysis | | Mean Conc. | % Diff. From Mean |
|-------------------------|------------|-----------------|--------|------------|-------------------|
| | | Run #1 | Run #2 | | |
| (Concentration in ppbv) | | | | | |
| 1,1,1-trichloroethane | Probe W14S | <20 | <20 | --- | --- |
| Trichloroethene | Probe W14S | <20 | <20 | --- | --- |
| Chloroform | Probe W14S | <20 | <20 | --- | --- |
| Vinyl chloride | Probe W14S | 47.2 | 49.6 | 48.4 | 2.5 |
| m+p-xylenes | Probe W14S | <30 | <30 | --- | --- |
| o-xylene | Probe W14S | <20 | <20 | --- | --- |

One Tedlar bag sample, laboratory number 00055-16, was analyzed for SCAQMD Rule 1150.1 components, permanent gases, and total gaseous non-methane organics (TGNMO). Agreement between repeat analyses is a measure of precision and is shown above in the column "% Difference from Mean". Repeat analyses are an important part of AtmAA's quality assurance program. The average % Difference from Mean for 5 repeat measurements from one Tedlar bag sample is 0.68%.



Lab #: 77303 Job #: 5734
 Sample Name/Number: W-14S
 Company: Shaw Environmental & Infrastructure
 Date Sampled: 1/06/2005
 Container: Cali-5-Bond Bag
 Field/Site Name: Bradley Landfill
 Location: Sun Valley
 Formation/Depth:
 Sampling Point:
 Date Received: 1/13/2005 Date Reported: 1/31/2005

| Component | Chemical mol. % | Delta C-13 per mil | Delta D per mil | C-14 conc. pMC | Tritium TU |
|------------------------|--------------------|-----------------------|--------------------|-------------------|---------------|
| Carbon Monoxide ----- | nd | | | | |
| Hydrogen Sulfide ----- | nd | | | | |
| Helium ----- | 0.0028 | | | | |
| Hydrogen ----- | 0.0023 | | | | |
| Argon ----- | 0.408 | | | | |
| Oxygen ----- | 0.146 | | | | |
| Nitrogen ----- | 36.16 | | | | |
| Carbon Dioxide ----- | 8.79 | -44.07 | | | |
| Methane ----- | 52.95 | -38.64 | -194.4 | 0.70 ± 0.10 | |
| Ethane ----- | 1.32 | | | | |
| Ethylene ----- | nd | | | | |
| Propane ----- | 0.170 | | | | |
| Iso-butane ----- | 0.0404 | | | | |
| N-butane ----- | 0.0018 | | | | |
| Iso-pentane ----- | 0.0112 | | | | |
| N-pentane ----- | nd | | | | |
| Hexanes + ----- | 0.0022 | | | | |

Total BTU/cu.ft. dry @ 60deg F & 14.7psia, calculated: 566

Specific gravity, calculated: 0.801

nd = not detected. na = not analyzed. Isotopic composition of carbon is relative to VPDB. Isotopic composition of hydrogen is relative to VSMOW. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %
 Chemical analysis based on standards accurate to within 2%


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LABORATORY ANALYSIS REPORT

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SCAQMD Rule 1150.1 Components Analysis in Probe Tedlar Bag Samples

Report Date: March 10, 2005

Client: Shaw Environmental

Project Location: Bradley Landfill

Client Project No.: 108341.01

Date Received: March 1, 2005

Date Analyzed: March 1 & 2, 2005

| AtmAA Lab No.: | 00605-11 | 00605-12 | 00605-13 | 00605-14 | 00605-15 |
|-----------------------|--------------------------------|----------|----------|----------|----------|
| Sample I.D.: | S10-R | S9-SR | S9-M1 | S9-M2 | E-14D |
| | BL-001 | BL-002 | BL-003 | BL-004 | BL-005 |
| Components | <i>(Concentration in %,v)</i> | | | | |
| Nitrogen | 38.6 | 70.2 | 69.0 | 79.1 | 26.0 |
| Oxygen | 0.98 | 1.09 | 1.15 | 1.42 | 0.38 |
| Methane | 43.2 | 20.6 | 17.0 | 8.94 | 47.6 |
| Carbon dioxide | 16.2 | 6.79 | 11.2 | 9.20 | 25.4 |
| | <i>(Concentration in ppmv)</i> | | | | |
| TGNMO | 271 | 308 | 169 | 137 | 350 |
| Hydrogen sulfide | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| | <i>(Concentration in ppbv)</i> | | | | |
| Benzene | <20 | 224 | <20 | <20 | <20 |
| Benzylchloride | <40 | <40 | <40 | <40 | <40 |
| Chlorobenzene | <30 | <30 | <30 | <30 | <30 |
| Dichlorobenzenes* | <30 | <30 | <30 | <30 | <30 |
| 1,1-dichloroethane | <30 | 45.6 | <30 | <30 | <30 |
| 1,2-dichloroethane | <20 | <20 | <20 | <20 | <20 |
| 1,1-dichloroethylene | <30 | <30 | <30 | <30 | <30 |
| Dichloromethane | <30 | 35.8 | <30 | <30 | <30 |
| 1,2-dibromoethane | <30 | <30 | <30 | <30 | <30 |
| Perchloroethylene | <30 | <30 | <30 | <30 | <30 |
| Carbon tetrachloride | <30 | <30 | <30 | <30 | <30 |
| Toluene | <20 | 157 | <20 | <20 | <20 |
| 1,1,1-trichloroethane | <20 | <20 | <20 | <20 | <20 |
| Trichloroethene | <20 | 39.1 | <20 | <20 | <20 |
| Chloroform | <20 | <20 | <20 | <20 | <20 |
| Vinyl chloride | 1320 | 938 | 1150 | 913 | 1630 |
| m+p-xylenes | <30 | <30 | <30 | <30 | <30 |
| o-xylene | <20 | <20 | <20 | <20 | <20 |

The reported oxygen concentration includes any argon present in the sample. Calibration is based on a standard atmosphere containing 20.95% oxygen and 0.93% argon.

The accuracy of the TCD/GC Method for permanent gases is +/- 2%, actual results are reported.

TGNMO is total gaseous non-methane organics measured and reported as ppm methane.

* total amount containing meta, para, and ortho isomers

Michael L. Porter G. MP
 Michael L. Porter
 Laboratory Director

QUALITY ASSURANCE SUMMARY (Repeat Analyses)

Project Location: Bradley Landfill
Date Received: March 1, 2005
Date Analyzed: March 1 & 2, 2005

| Components | Sample ID | Repeat Analysis | | Mean Conc. | % Diff. From Mean |
|-------------------------|-----------|------------------------|--------|------------|-------------------|
| | | Run #1 | Run #2 | | |
| | | (Concentration in %,v) | | | |
| Nitrogen | S10-R | 38.5 | 38.6 | 38.6 | 0.13 |
| | S9-M1 | 69.1 | 69.0 | 69.0 | 0.072 |
| Oxygen | S10-R | 0.98 | 0.99 | 0.98 | 0.51 |
| | S9-M1 | 1.13 | 1.17 | 1.15 | 1.7 |
| Methane | S10-R | 43.2 | 43.2 | 43.2 | 0.0 |
| | S9-M1 | 17.1 | 17.0 | 17.0 | 0.29 |
| Carbon dioxide | S10-R | 16.2 | 16.2 | 16.2 | 0.0 |
| | S9-M1 | 11.2 | 11.3 | 11.2 | 0.44 |
| (Concentration in ppmv) | | | | | |
| TGNMO | S10-R | 274 | 268 | 271 | 1.1 |
| | S9-SR | 310 | 305 | 308 | 0.81 |
| Hydrogen sulfide | S10-R | <0.5 | <0.5 | --- | --- |
| (Concentration in ppbv) | | | | | |
| Benzene | S10-R | <20 | <20 | --- | --- |
| Benzylchloride | S10-R | <40 | <40 | --- | --- |
| Chlorobenzene | S10-R | <30 | <30 | --- | --- |
| Dichlorobenzenes | S10-R | <30 | <30 | --- | --- |
| 1,1-dichloroethane | S10-R | <30 | <30 | --- | --- |
| 1,2-dichloroethane | S10-R | <20 | <20 | --- | --- |
| 1,1-dichloroethylene | S10-R | <30 | <30 | --- | --- |
| Dichloromethane | S10-R | <30 | <30 | --- | --- |
| 1,2-dibromoethane | S10-R | <30 | <30 | --- | --- |
| Perchloroethylene | S10-R | <30 | <30 | --- | --- |



QUALITY ASSURANCE SUMMARY
(Repeat Analyses)
(continued)

| Components | Sample ID | Repeat Analysis | | Mean Conc. | % Diff. From Mean |
|-----------------------|-----------|-------------------------|--------|------------|-------------------|
| | | Run #1 | Run #2 | | |
| | | (Concentration in ppbv) | | | |
| Carbon tetrachloride | S10-R | <30 | <30 | --- | --- |
| Toluene | S10-R | <20 | <20 | --- | --- |
| 1,1,1-trichloroethane | S10-R | <20 | <20 | --- | --- |
| Trichloroethene | S10-R | <20 | <20 | --- | --- |
| Chloroform | S10-R | <20 | <20 | --- | --- |
| Vinyl chloride | S10-R | 1330 | 1300 | 1320 | 1.1 |
| m+p-xylenes | S10-R | <30 | <30 | --- | --- |
| o-xylene | S10-R | <20 | <20 | --- | --- |

Five Tedlar bag samples, laboratory numbers 00605-(11-15), was analyzed for SCAQMD 1150.1 components, permanent gases, and total gaseous non-methane organics (TGNMO). Agreement between repeat analyses is a measure of precision and is shown above in the column "% Difference from Mean". Repeat analyses are an important part of AtmAA's quality assurance program. The average % Difference from Mean for 11 repeat measurements from five Tedlar bag samples is 0.56%.





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LABORATORY ANALYSIS REPORT

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SCAQMD Rule 1150.1 Components Analysis in Probe Tedlar Bag Sample

Report Date: February 21, 2005
Client: Shaw Environmental
Project Location: Bradley Landfill
Client Project No.: 108341.01
Date Received: February 9, 2005
Date Analyzed: February 9-11, 2005

AtmAA Lab No.: 00405-5
Sample I.D.: Probe W14S
BL-010

| Components | (Concentration in %,v) |
|----------------|------------------------|
| Nitrogen | 80.6 |
| Oxygen | 1.14 |
| Methane | 7.77 |
| Carbon dioxide | 8.98 |

| | (Concentration in ppmv) |
|------------------|-------------------------|
| TGNMO | 150 |
| Hydrogen sulfide | <0.5 |

| | (Concentration in ppbv) |
|-----------------------|-------------------------|
| Benzene | <20 |
| Benzylchloride | <40 |
| Chlorobenzene | <30 |
| Dichlorobenzenes* | <30 |
| 1,1-dichloroethane | <30 |
| 1,2-dichloroethane | <20 |
| 1,1-dichloroethylene | <30 |
| Dichloromethane | <30 |
| 1,2-dibromoethane | <30 |
| Perchloroethylene | 2380 |
| Carbon tetrachloride | <30 |
| Toluene | 56.6 |
| 1,1,1-trichloroethane | 87.4 |
| Trichloroethene | 47.8 |
| Chloroform | <20 |
| Vinyl chloride | 129 |
| m+p-xylenes | 138 |
| o-xylene | 83.8 |

The accuracy of permanent gas analysis by TCD/GC is +/- 2%, actual results are reported.

The reported oxygen concentration includes any argon present in the sample. Calibration is based on a standard atmosphere containing 20.95% oxygen and 0.93% argon.

TGNMO is total gaseous non-methane organics measured and reported as ppm methane.

* total amount containing meta, para, and ortho isomers


Michael L. Porter
Laboratory Director

QUALITY ASSURANCE SUMMARY
(Repeat Analyses)

Project Location: Bradley Landfill
Date Received: February 9, 2005
Date Analyzed: February 9-11, 2005

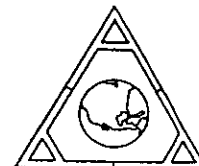
| Components | Sample ID | Repeat Analysis | | Mean Conc. | % Diff. From Mean |
|-------------------------|------------|-----------------|--------|------------|-------------------|
| | | Run #1 | Run #2 | | |
| (Concentration in %,v) | | | | | |
| Nitrogen | Probe W14S | 80.5 | 80.8 | 80.6 | 0.18 |
| Oxygen | Probe W14S | 1.12 | 1.15 | 1.14 | 1.3 |
| Methane | Probe W14S | 7.72 | 7.82 | 7.77 | 0.64 |
| Carbon dioxide | Probe W14S | 8.98 | 8.99 | 8.98 | 0.056 |
| (Concentration in ppmv) | | | | | |
| TGNMO | Probe W14S | 151 | 148 | 150 | 1.0 |
| Hydrogen sulfide | Probe W14S | <0.5 | <0.5 | --- | --- |
| (Concentration in ppbv) | | | | | |
| Benzene | Probe W14S | <20 | <20 | --- | --- |
| Benzylchloride | Probe W14S | <40 | <40 | --- | --- |
| Chlorobenzene | Probe W14S | <30 | <30 | --- | --- |
| Dichlorobenzenes | Probe W14S | <30 | <30 | --- | --- |
| 1,1-dichloroethane | Probe W14S | <30 | <30 | --- | --- |
| 1,2-dichloroethane | Probe W14S | <20 | <20 | --- | --- |
| 1,1-dichloroethylene | Probe W14S | <30 | <30 | --- | --- |
| Dichloromethane | Probe W14S | <30 | <30 | --- | --- |
| 1,2-dibromoethane | Probe W14S | <30 | <30 | --- | --- |
| Perchloroethylene | Probe W14S | 2380 | 2370 | 2380 | 0.21 |
| Carbon tetrachloride | Probe W14S | <30 | <30 | --- | --- |
| Toluene | Probe W14S | 56.9 | 56.2 | 56.6 | 0.62 |



QUALITY ASSURANCE SUMMARY
(Repeat Analyses)
(continued)

| Components | Sample ID | Repeat Analysis | | Mean Conc. | % Diff. From Mean |
|-------------------------|------------|-----------------|--------|------------|-------------------|
| | | Run #1 | Run #2 | | |
| (Concentration in ppbv) | | | | | |
| 1,1,1-trichloroethane | Probe W14S | 86.8 | 88.0 | 87.4 | 0.69 |
| Trichloroethene | Probe W14S | 48.4 | 47.1 | 47.8 | 1.4 |
| Chloroform | Probe W14S | <20 | <20 | --- | --- |
| Vinyl chloride | Probe W14S | 130 | 128 | 129 | 0.78 |
| m+p-xylenes | Probe W14S | 139 | 137 | 138 | 0.72 |
| o-xylene | Probe W14S | 85.3 | 82.4 | 83.8 | 1.7 |

One Tedlar bag sample, laboratory number 00405-5, was analyzed for SCAQMD Rule 1150.1 components, permanent gases, and total gaseous non-methane organics (TGNMO). Agreement between repeat analyses is a measure of precision and is shown above in the column "% Difference from Mean". Repeat analyses are an important part of AtmAA's quality assurance program. The average % Difference from Mean for 12 repeat measurements from the one Tedlar bag sample is 0.78%.





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LABORATORY ANALYSIS REPORT

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Speciated Hydrocarbons Analysis in Tedlar Bag Samples

Report Date: February 18, 2005
Client: Shaw Environmental
Site: Bradley Landfill
Client Project No.: 108341.01
Location: Sun Valley

Date Received: February 9, 2005
Date Analyzed: February 10, 2005

ANALYSIS DESCRIPTION

Hydrocarbon speciation analysis was performed by flame ionization detection/gas chromatography (FID/GC), modified EPA-18.

| | | | | |
|--------------------------------------|-------------------------------------|----------|--|--|
| AtmAA Lab No.: | 00405-5 | (repeat) | | |
| Sample ID: | BL-010 | BL-010 | | |
| | P W14S | P W14S | | |
| | (Concentration in ppmv, as methane) | | | |
| Methane | 77200 | 78200 | | |
| C2 | 0.28 | 0.37 | | |
| C3 | 11.84 | 12.20 | | |
| C4 | 8.35 | 8.66 | | |
| C5 | 3.05 | 2.88 | | |
| C6 | 9.04 | 6.41 | | |
| C7 | 13.69 | 14.44 | | |
| C8 | 29.28 | 38.40 | | |
| C9 | 37.26 | 38.86 | | |
| C10 | 69.75 | 66.73 | | |
| C11 | 13.73 | 20.35 | | |
| C12 | 11.99 | 6.10 | | |
| C13 | <2 | <2 | | |
| total non-methane as ppmv methane | 208 | 215 | | |

 for MP
Michael L. Porter
Laboratory Director



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LABORATORY ANALYSIS REPORT

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Speciated Hydrocarbons Analysis in Tedlar Bag Samples

Report Date: February 18, 2005
Client: Shaw Environmental
Site: Bradley Landfill
Client Project No.: 108341.01
Location: Sun Valley

Date Received: February 9, 2005
Date Analyzed: February 10, 2005

ANALYSIS DESCRIPTION

Hydrocarbon speciation analysis was performed by flame ionization detection/gas chromatography (FID/GC), modified EPA-18.

| | | |
|----------------|----------------------------------------|----------|
| AtmAA Lab No.: | 00405-5 | (repeat) |
| Sample ID: | BL-010 | BL-010 |
| | P W14S | P W14S |
| | (Concentration in ppmv, as component) | |
| Methane | 77200 | 78200 |
| C2 | 0.140 | 0.186 |
| C3 | 3.947 | 4.066 |
| C4 | 2.088 | 2.164 |
| C5 | 0.610 | 0.576 |
| C6 | 1.506 | 1.068 |
| C7 | 1.955 | 2.063 |
| C8 | 3.660 | 4.800 |
| C9 | 4.140 | 4.318 |
| C10 | 6.975 | 6.673 |
| C11 | 1.248 | 1.850 |
| C12 | 0.999 | 0.508 |
| C13 | <0.15 | <0.15 |

 for MP

Michael L. Porter
Laboratory Director

SOL = Other Solid



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LABORATORY ANALYSIS REPORT

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SCAQMD Rule 1150.1 Components Analysis in Probe Tedlar Bag Sample

Report Date: March 3, 2005

Client: Shaw Environmental

Project Location: Bradley Landfill

Date Received: February 17, 2005

Date Analyzed: February 17 & 18, 2005

AtmAA Lab No.: 00485-42

Sample I.D.: Probe E-8D

BL-004

| Components | (Concentration in %,v) |
|----------------|------------------------|
| Nitrogen | 5.76 |
| Oxygen | 0.68 |
| Methane | 55.6 |
| Carbon dioxide | 36.1 |

| | (Concentration in ppmv) |
|------------------|-------------------------|
| TGNMO | 517 |
| Hydrogen sulfide | <0.5 |

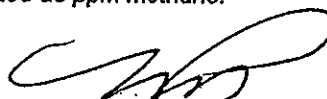
| | (Concentration in ppbv) |
|-----------------------|-------------------------|
| Benzene | <20 |
| Benzylchloride | <40 |
| Chlorobenzene | <30 |
| Dichlorobenzenes* | <30 |
| 1,1-dichloroethane | 160 |
| 1,2-dichloroethane | <20 |
| 1,1-dichloroethylene | <30 |
| Dichloromethane | <30 |
| 1,2-dibromoethane | <30 |
| Perchloroethylene | <30 |
| Carbon tetrachloride | <30 |
| Toluene | <20 |
| 1,1,1-trichloroethane | <20 |
| Trichloroethene | <20 |
| Chloroform | <20 |
| Vinyl chloride | 3350 |
| m+p-xylenes | <30 |
| o-xylene | <20 |

The accuracy of permanent gas analysis by TCD/GC is +/- 2%, actual results are reported.

The reported oxygen concentration includes any argon present in the sample. Calibration is based on a standard atmosphere containing 20.95% oxygen and 0.93% argon.

TGNMO is total gaseous non-methane organics measured and reported as ppm methane.

* total amount containing meta, para, and ortho isomers


Michael L. Porter
Laboratory Director

QUALITY ASSURANCE SUMMARY
(Repeat Analyses)

Project Location: Bradley Landfill
Date Received: February 17, 2005
Date Analyzed: February 17 & 18, 2005

| Components | Sample ID | Repeat Analysis | | Mean Conc. | % Diff. From Mean |
|-------------------------|------------|------------------------|--------|------------|-------------------|
| | | Run #1 | Run #2 | | |
| | | (Concentration in %,v) | | | |
| Nitrogen | Probe E-8D | 5.80 | 5.71 | 5.76 | 0.78 |
| Oxygen | Probe E-8D | 0.69 | 0.67 | 0.68 | 1.5 |
| Methane | Probe E-8D | 54.8 | 54.3 | 55.6 | 0.36 |
| Carbon dioxide | Probe E-8D | 37.2 | 37.4 | 36.1 | 0.55 |
| (Concentration in ppmv) | | | | | |
| TGNMO | No Repeat | | | | |
| Hydrogen sulfide | Probe E-8D | <0.5 | <0.5 | --- | --- |
| (Concentration in ppbv) | | | | | |
| Benzene | Probe E-8D | <20 | <20 | --- | --- |
| Benzylchloride | Probe E-8D | <40 | <40 | --- | --- |
| Chlorobenzene | Probe E-8D | <30 | <30 | --- | --- |
| Dichlorobenzenes | Probe E-8D | <30 | <30 | --- | --- |
| 1,1-dichloroethane | Probe E-8D | 163 | 158 | 160 | 1.6 |
| 1,2-dichloroethane | Probe E-8D | <20 | <20 | --- | --- |
| 1,1-dichloroethylene | Probe E-8D | <30 | <30 | --- | --- |
| Dichloromethane | Probe E-8D | <30 | <30 | --- | --- |
| 1,2-dibromoethane | Probe E-8D | <30 | <30 | --- | --- |
| Perchloroethylene | Probe E-8D | <30 | <30 | --- | --- |
| Carbon tetrachloride | Probe E-8D | <30 | <30 | --- | --- |
| Toluene | Probe E-8D | <20 | <20 | --- | --- |





Address: 9081 Tujunga Avenue

City / State / Zip: Sun Valley, CA 91352

Manager: *Darrell Thompson*

Phone/Fax Number: 818-767-0444

Send Report To: *Tom Sandhu*

Address: 9081 Tujunga Avenue

City: Sun Valley, CA 91352

Project Contact: *Tom Sandhu*

Phone/Fax Number: (818) 822-5273 / Fax (626) 535-9076

1ST Qtr 2005
LFG Chain

CHAIN OF CUSTODY

Ref. Document #

Page 1 of 1

Project Number: 108341.01

Project Name: *Bradley Landfill*

Project Location: *Sun Valley, California*

Purchase Order #:

Lab Destination: *AtmAA, Inc.*

Lab Contact: *Michael*

Lab Phone #: (818) 223-3277

Program

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DOT

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NPDES

RCRA

Other

Requesting Testing Program

[illegible]


AtmAA Inc.

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LABORATORY ANALYSIS REPORT

 environmental consultants
laboratory services

SCAQMD Rule 1150.1 Components Analysis in Probe Tedlar Bag Samples

Report Date: April 11, 2005

Client: Shaw Environmental

Project Location: Bradley Landfill

Date Received: March 25, 2005

Date Analyzed: March 25, 2005

| AtmAA Lab No.: | 00845-6 | 00845-7 |
|-----------------------|--------------------------------|-------------|
| Sample I.D.: | Probe W14S | Probe P15DR |
| | BL-001 | BL-002 |
| Components | <i>(Concentration in %,v)</i> | |
| Nitrogen | 12.2 | 9.24 |
| Oxygen | 0.96 | 2.52 |
| Methane | 79.6 | 51.0 |
| Carbon dioxide | 4.48 | 36.8 |
| | <i>(Concentration in ppmv)</i> | |
| TGNMO | 5680 | 257 |
| Hydrogen sulfide | 5.80 | <0.5 |
| | <i>(Concentration in ppbv)</i> | |
| Benzene | <20 | <20 |
| Benzylchloride | <40 | <40 |
| Chlorobenzene | <30 | <30 |
| Dichlorobenzenes* | <30 | <30 |
| 1,1-dichloroethane | <30 | <30 |
| 1,2-dichloroethane | <20 | <20 |
| 1,1-dichloroethylene | <30 | <30 |
| Dichloromethane | <30 | <30 |
| 1,2-dibromoethane | <30 | <30 |
| Perchloroethylene | <30 | <30 |
| Carbon tetrachloride | <30 | <30 |
| Toluene | 47.4 | 60.2 |
| 1,1,1-trichloroethane | <20 | <20 |
| Trichloroethene | <20 | <20 |
| Chloroform | <20 | <20 |
| Vinyl chloride | 606 | 259 |
| m+p-xylenes | <30 | <30 |
| o-xylene | <20 | <20 |

The accuracy of permanent gas analysis by TCD/GC is +/- 2%, actual results are reported.

The reported oxygen concentration includes any argon present in the sample. Calibration is based on a standard atmosphere containing 20.95% oxygen and 0.93% argon.

TGNMO is total gaseous non-methane organics measured and reported as ppm methane.

* total amount containing meta, para, and ortho isomers

 Michael L. Porter
Laboratory Director

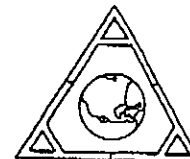
QUALITY ASSURANCE SUMMARY
(Repeat Analyses)

Project Location: Bradley Landfill

Date Received: March 25, 2005

Date Analyzed: March 25, 2005

| Components | Sample ID | Repeat Analysis | | Mean | % Diff. |
|-------------------------|------------|------------------------|--------|-------|-----------|
| | | Run #1 | Run #2 | Conc. | From Mean |
| | | (Concentration in %,v) | | | |
| Nitrogen | Probe W14S | 12.2 | 12.3 | 12.2 | 0.41 |
| Oxygen | Probe W14S | 0.97 | 0.95 | 0.96 | 1.0 |
| Methane | Probe W14S | 79.4 | 79.8 | 79.6 | 0.25 |
| Carbon dioxide | Probe W14S | 4.49 | 4.48 | 4.48 | 0.11 |
| (Concentration in ppmv) | | | | | |
| TGNMO | Probe W14S | 5870 | 5480 | 5680 | 3.4 |
| Hydrogen sulfide | Probe W14S | 5.64 | 5.97 | 5.80 | 2.8 |
| (Concentration in ppbv) | | | | | |
| Benzene | Probe W14S | <20 | <20 | --- | --- |
| Benzylchloride | Probe W14S | <40 | <40 | --- | --- |
| Chlorobenzene | Probe W14S | <30 | <30 | --- | --- |
| Dichlorobenzenes | Probe W14S | <30 | <30 | --- | --- |
| 1,1-dichloroethane | Probe W14S | <30 | <30 | --- | --- |
| 1,2-dichloroethane | Probe W14S | <30 | <30 | --- | --- |
| 1,1-dichloroethylene | Probe W14S | <30 | <30 | --- | --- |
| Dichloromethane | Probe W14S | <30 | <30 | --- | --- |
| 1,2-dibromoethane | Probe W14S | <30 | <30 | --- | --- |
| Perchloroethylene | Probe W14S | <30 | <30 | --- | --- |
| Carbon tetrachloride | Probe W14S | <30 | <30 | --- | --- |
| Toluene | Probe W14S | 46.5 | 48.3 | 47.4 | 1.9 |



QUALITY ASSURANCE SUMMARY
(Repeat Analyses)
(continued)

| Components | Sample ID | Repeat Analysis | | Mean Conc. | % Diff. From Mean |
|-------------------------|------------|-----------------|--------|------------|-------------------|
| | | Run #1 | Run #2 | | |
| (Concentration in ppbv) | | | | | |
| 1,1,1-trichloroethane | Probe W14S | <20 | <20 | --- | --- |
| Trichloroethene | Probe W14S | <20 | <20 | --- | --- |
| Chloroform | Probe W14S | <20 | <20 | --- | --- |
| Vinyl chloride | Probe W14S | 600 | 613 | 606 | 1.1 |
| m+p-xylenes | Probe W14S | <30 | <30 | --- | --- |
| o-xylene | Probe W14S | <20 | <20 | --- | --- |

Two Tedlar bag samples, laboratory numbers 00845-(6 & 7), were analyzed for SCAQMD Rule 1150.1 components, permanent gases, and total gaseous non-methane organics (TGNMO). Agreement between repeat analyses is a measure of precision and is shown above in the column "% Difference from Mean". Repeat analyses are an important part of AtmAA's quality assurance program. The average % Difference from Mean for 8 repeat measurements from the two Tedlar bag samples is 1.4%.




AtmAA Inc.

23917 Craftsman Rd., Calabasas, CA 91302 • (818) 223-3277 • FAX (818) 223-8250

LABORATORY ANALYSIS REPORT

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laboratory services

TO-14 Component Analysis in Probe Tedlar Bag Samples, by GC/MS

Report Date: April 15, 2005

Client: Shaw Environmental

Project Location: Bradley Landfill

Date Received: March 25, 2005

Date Analyzed: March 25, 2005

| AtmAA Lab No.: Sample ID: | 00845-6 Probe W14S BL-001 | 00845-7 Probe P15DR BL-002 |
|------------------------------|---------------------------------|----------------------------------|
| Components | (Concentrations in ppbv) | |
| Freon-12 | <30 | <30 |
| Methyl chloride | <40 | <40 |
| Freon-114 | <30 | <30 |
| Vinyl chloride | 606 | 259 |
| Methyl bromide | <40 | <40 |
| Ethyl chloride | <30 | <30 |
| Freon-11 | <30 | <30 |
| 1,1-dichloroethylene | <30 | <30 |
| Dichloromethane | <30 | <30 |
| Freon-113 | <30 | <30 |
| 1,1-dichloroethane | <30 | <30 |
| c-1,2-dichloroethene | <30 | <30 |
| Chloroform | <20 | <20 |
| 1,2-dichloroethane | <20 | <20 |
| 1,1,1-trichloroethane | <20 | <20 |
| Benzene | <20 | <20 |
| Carbon tetrachloride | <30 | <30 |
| 1,2-dichloropropane | <30 | <30 |
| Trichloroethene | <20 | <20 |
| t-1,3-dichloropropene | <30 | <30 |
| c-1,3-dichloropropene | <30 | <30 |
| 1,1,2-trichloroethane | <30 | <30 |
| Toluene | 47.4 | 60.2 |
| 1,2-dibromoethane | <30 | <30 |
| Perchloroethylene | <30 | <30 |
| Chlorobenzene | <30 | <30 |
| Ethylbenzene | <20 | <20 |
| m+p-xylenes | <30 | <30 |
| Styrene | <30 | <30 |
| 1,1,2,2-tetrachloroethane | <30 | <30 |
| o-xylene | <20 | <20 |
| 4-ethyl-toluene | <30 | <30 |
| 1,3,5-trimethylbenzene | <30 | <30 |
| 1,2,4-trimethylbenzene | <30 | <30 |
| m-dichlorobenzene | <20 | <20 |
| p-dichlorobenzene | <30 | <30 |
| Benzylchloride | <50 | <50 |
| o-dichlorobenzene | <20 | <20 |
| 1,2,4-trichlorobenzene | <60 | <60 |
| Hexachlorobutadiene | <50 | <50 |

 Michael L. Porter
Laboratory Director

QUALITY ASSURANCE SUMMARY
(Repeat Analyses)

Project Location: Bradley Landfill

Date Received: March 25, 2005

Date Analyzed: March 25, 2005

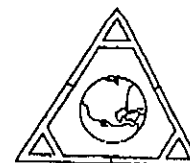
| Components | Sample ID | Repeat Analysis | | Mean Conc. | % Diff. From Mean |
|-----------------------|------------|-------------------------|--------|------------|-------------------|
| | | Run #1 | Run #2 | | |
| | | (Concentration in ppbv) | | | |
| Freon-12 | Probe W14S | <30 | <30 | --- | --- |
| Methyl chloride | Probe W14S | <40 | <40 | --- | --- |
| Freon-114 | Probe W14S | <30 | <30 | --- | --- |
| Vinyl chloride | Probe W14S | 600 | 613 | 606 | 1.1 |
| Methyl bromide | Probe W14S | <40 | <40 | --- | --- |
| Ethyl chloride | Probe W14S | <30 | <30 | --- | --- |
| Freon-11 | Probe W14S | <30 | <30 | --- | --- |
| 1,1-dichloroethylene | Probe W14S | <30 | <30 | --- | --- |
| Dichloromethane | Probe W14S | <30 | <30 | --- | --- |
| Freon-113 | Probe W14S | <30 | <30 | --- | --- |
| 1,1-dichloroethane | Probe W14S | <30 | <30 | --- | --- |
| c-1,2-dichloroethene | Probe W14S | <30 | <30 | --- | --- |
| Chloroform | Probe W14S | <20 | <20 | --- | --- |
| 1,2-dichloroethane | Probe W14S | <20 | <20 | --- | --- |
| 1,1,1-trichloroethane | Probe W14S | <20 | <20 | --- | --- |
| Benzene | Probe W14S | <20 | <20 | --- | --- |
| Carbon tetrachloride | Probe W14S | <30 | <30 | --- | --- |
| 1,2-dichloropropane | Probe W14S | <30 | <30 | --- | --- |
| Trichloroethene | Probe W14S | <20 | <20 | --- | --- |
| t-1,3-dichloropropene | Probe W14S | <30 | <30 | --- | --- |
| c-1,3-dichloropropene | Probe W14S | <30 | <30 | --- | --- |



QUALITY ASSURANCE SUMMARY
(Repeat Analyses)
(continued)

| Components | Sample ID | Repeat Analysis | | Mean Conc. | % Diff. From Mean |
|---------------------------|------------|-------------------------|--------|------------|-------------------|
| | | Run #1 | Run #2 | | |
| | | (Concentration in ppbv) | | | |
| 1,1,2-trichloroethane | Probe W14S | <30 | <30 | --- | --- |
| Toluene | Probe W14S | 46.5 | 48.3 | 47.4 | 1.9 |
| 1,2-dibromoethane | Probe W14S | <30 | <30 | --- | --- |
| Perchloroethylene | Probe W14S | <30 | <30 | --- | --- |
| Chlorobenzene | Probe W14S | <30 | <30 | --- | --- |
| Ethylbenzene | Probe W14S | <20 | <20 | --- | --- |
| m+p-xylenes | Probe W14S | <30 | <30 | --- | --- |
| Styrene | Probe W14S | <30 | <30 | --- | --- |
| 1,1,2,2-tetrachloroethane | Probe W14S | <30 | <30 | --- | --- |
| o-xylene | Probe W14S | <20 | <20 | --- | --- |
| 4-ethyl-toluene | Probe W14S | <30 | <30 | --- | --- |
| 1,3,5-trimethylbenzene | Probe W14S | <30 | <30 | --- | --- |
| 1,2,4-trimethylbenzene | Probe W14S | <30 | <30 | --- | --- |
| m-dichlorobenzene | Probe W14S | <20 | <20 | --- | --- |
| p-dichlorobenzene | Probe W14S | <30 | <30 | --- | --- |
| Benzylchloride | Probe W14S | <50 | <50 | --- | --- |
| o-dichlorobenzene | Probe W14S | <20 | <20 | --- | --- |
| 1,2,4-trichlorobenzene | Probe W14S | <60 | <60 | --- | --- |
| Hexachlorobutadiene | Probe W14S | <50 | <50 | --- | --- |

Two Tedlar bag samples, laboratory numbers 00845-(6 & 7), were analyzed for listed TO-14 components by GC/MS. Agreement between repeat analyses is a measure of precision and is shown above in the column "% Difference from Mean". Repeat analyses are an important part of ATMAA's quality assurance program. The average % Difference from Mean for 2 repeat measurements from the two Tedlar bag samples is 1.5%.




AtmAA Inc.

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LABORATORY ANALYSIS REPORT

 environmental consultants
laboratory services

Speciated Hydrocarbons Analysis in Tedlar Bag Samples

 Report Date: April 15, 2005
 Client: Shaw Environmental
 Project Location: Bradley Landfill
 Client Project No.: 108341.01

 Date Received: March 25, 2005
 Date Analyzed: March 25, 2005

ANALYSIS DESCRIPTION
Hydrocarbon speciation analysis was performed by flame ionization detection/gas chromatography (FID/GC), modified EPA-18.

| | | | |
|----------------|------------|------------|-------------|
| AtmAA Lab No.: | 00845-6 | (repeat) | 00845-7 |
| Sample ID: | Probe W14S | Probe W14S | Probe P15DR |
| | BL-001 | BL-001 | BL-002 |

(Concentration in ppmv, component)

| | | | |
|---------|--------|--------|--------|
| Methane | 794000 | 798000 | 510000 |
|---------|--------|--------|--------|

 non-methane hydrocarbons
 analysis by carbon
 number grouping

(Concentration in ppmv, component)

| | | | |
|-----|-------|-------|-------|
| C2 | 20000 | 22000 | <0.11 |
| C3 | 100 | 103 | 0.670 |
| C4 | 11.3 | 10.4 | 0.190 |
| C5 | 0.390 | 0.363 | <0.05 |
| C6 | 0.063 | 0.082 | <0.05 |
| C7 | 0.063 | 0.055 | 0.067 |
| C8 | 0.080 | 0.100 | 0.120 |
| C9 | 0.036 | 0.079 | 0.027 |
| C10 | <0.05 | <0.05 | <0.05 |
| C11 | <0.05 | <0.05 | <0.05 |
| C12 | <0.05 | <0.05 | <0.05 |

| | | | |
|-------|-------|-------|------|
| TNMNE | 349 | 355 | 4.44 |
| TNMHC | 40349 | 44355 | 4.44 |

 TNMNE - total non-methane, non-ethane, hydrocarbons as ppmv methane.
 TNMHC - total non-methane hydrocarbons as ppmv methane.

 Michael L. Porter
 Laboratory Director

Analysis Requested by

Name: Darrell ThompsonCompany: Shaw Env. & Infra., Inc.Address: 9081 Tutunga AvenueSun Valley, CA 91352

Tel: (818) 822-5273 - T. Sandhu

Fax: (818) 767-0444

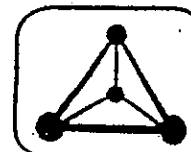
Project

Bradley Landfill

Location

Sun Valley, CA

Sampled by

Darrell Thompson**ISOTECH**

Analyses & Services Requested

Sample Description

| Cylinder Number | Source or Description of Sample | Date Sampled | Analyses & Services Requested | | | | | | | | | | Comments |
|-----------------|---------------------------------|--------------|-------------------------------|---------------|---------------|---------------|---------------|---------------|--------------|--------------|--------------|--|----------|
| | | | NG-1 Analysis | NG-2 Analysis | NG-3 Analysis | BG-1 Analysis | BG-2 Analysis | BG-3 Analysis | SIW analysis | RAG Analysis | TAG Analysis | | |
| | W14S - PROBE SAMPLE | 3/24/05 | | | | | | | | | | | |
| | P15DR - WELL SAMPLE | 3/24/05 | | | | | | | | | | | |
| | W14M - PROBE SAMPLE | 4/5/05 | | | | | | | | | | | |
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Chain of Custody Record

| Signature | Company | Date | Time |
|-----------------------------------------|---------------------------|----------------|----------------|
| Relinquished by <u>Darrell Thompson</u> | <u>Shaw Environmental</u> | <u>4/5/05</u> | <u>4:30 PM</u> |
| Received by | | <u>3/24/05</u> | <u>5:45 PM</u> |
| Relinquished by | | | |
| Received by | | | |
| Relinquished by | | | |
| Received by | | | |



AtmAA Inc.

23917 Craftsman Rd., Calabasas, CA 91302 • (818) 223-3277 • FAX (818) 223-8250

LABORATORY ANALYSIS REPORT

environmental consultants
laboratory services

SCAQMD Rule 1150.1 Components Analysis in Probe Tedlar Bag Sample

Report Date: April 18, 2005
Client: Shaw Environmental
Project Location: Bradley Landfill
Client Project No.: 108341.01
Date Received: April 1, 2005
Date Analyzed: April 1-3, 2005

AtmAA Lab No.: 00915-11
Sample I.D.: Probe E-8D

BL-001

| Components | (Concentration in %,v) |
|----------------|------------------------|
| Nitrogen | 6.35 |
| Oxygen | 0.37 |
| Methane | 53.8 |
| Carbon dioxide | 38.4 |

| | (Concentration in ppmv) |
|------------------|-------------------------|
| TGNMO | 596 |
| Hydrogen sulfide | <0.5 |

| | (Concentration in ppbv) |
|-----------------------|-------------------------|
| Benzene | <20 |
| Benzylchloride | <40 |
| Chlorobenzene | <30 |
| Dichlorobenzenes* | <30 |
| 1,1-dichloroethane | 188 |
| 1,2-dichloroethane | <20 |
| 1,1-dichloroethylene | <30 |
| Dichloromethane | <30 |
| 1,2-dibromoethane | <30 |
| Perchloroethylene | <30 |
| Carbon tetrachloride | <30 |
| Toluene | <20 |
| 1,1,1-trichloroethane | <20 |
| Trichloroethene | <20 |
| Chloroform | <20 |
| Vinyl chloride | 3190 |
| m+p-xylenes | <30 |
| o-xylene | <20 |

The accuracy of permanent gas analysis by TCD/GC is +/- 2%, actual results are reported.

The reported oxygen concentration includes any argon present in the sample. Calibration is based on a standard atmosphere containing 20.95% oxygen and 0.93% argon.

TGNMO is total gaseous non-methane organics measured and reported as ppm methane.

* total amount containing meta, para, and ortho isomers


Michael L. Porter
Laboratory Director

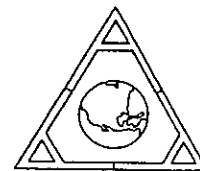
QUALITY ASSURANCE SUMMARY
(Repeat Analyses)

Project Location: Bradley Landfill

Date Received: April 1, 2005

Date Analyzed: April 1-3, 2005

| Components | Sample ID | Repeat Analysis | | Mean Conc. | % Diff. From Mean |
|-------------------------|------------|------------------------|--------|------------|-------------------|
| | | Run #1 | Run #2 | | |
| | | (Concentration in %,v) | | | |
| Nitrogen | Probe E-8D | 6.29 | 6.41 | 6.35 | 0.94 |
| Oxygen | Probe E-8D | 0.40 | 0.34 | 0.37 | 8.1 |
| Methane | Probe E-8D | 53.8 | 53.8 | 53.8 | 0.0 |
| Carbon dioxide | Probe E-8D | 38.6 | 38.2 | 38.40 | 0.52 |
| (Concentration in ppmv) | | | | | |
| TGNMO | Probe E-8D | 595 | 597 | 596 | 0.17 |
| Hydrogen sulfide | Probe E-8D | <0.5 | <0.5 | --- | --- |
| (Concentration in ppbv) | | | | | |
| Benzene | Probe E-8D | <20 | <20 | --- | --- |
| Benzylchloride | Probe E-8D | <40 | <40 | --- | --- |
| Chlorobenzene | Probe E-8D | <30 | <30 | --- | --- |
| Dichlorobenzenes | Probe E-8D | <30 | <30 | --- | --- |
| 1,1-dichloroethane | Probe E-8D | 190 | 186 | 188 | 1.1 |
| 1,2-dichloroethane | Probe E-8D | <20 | <20 | --- | --- |
| 1,1-dichloroethylene | Probe E-8D | <30 | <30 | --- | --- |
| Dichloromethane | Probe E-8D | <30 | <30 | --- | --- |
| 1,2-dibromoethane | Probe E-8D | <30 | <30 | --- | --- |
| Perchloroethylene | Probe E-8D | <30 | <30 | --- | --- |
| Carbon tetrachloride | Probe E-8D | <30 | <30 | --- | --- |
| Toluene | Probe E-8D | <20 | <20 | --- | --- |



QUALITY ASSURANCE SUMMARY
(Repeat Analyses)
(continued)

| Components | Sample ID | Repeat Analysis | | Mean Conc. | % Diff. From Mean |
|-----------------------|------------|-------------------------|--------|------------|-------------------|
| | | Run #1 | Run #2 | | |
| | | (Concentration in ppbv) | | | |
| 1,1,1-trichloroethane | Probe E-8D | <20 | <20 | --- | --- |
| Trichloroethene | Probe E-8D | <20 | <20 | --- | --- |
| Chloroform | Probe E-8D | <20 | <20 | --- | --- |
| Vinyl chloride | Probe E-8D | 3230 | 3150 | 3190 | 1.2 |
| m+p-xylenes | Probe E-8D | <30 | <30 | --- | --- |
| o-xylene | Probe E-8D | <20 | <20 | --- | --- |

One Tedlar bag sample, laboratory number 00915-11, was analyzed for SCAQMD Rule 1150.1 components, permanent gases, and total gaseous non-methane organics (TGNMO). Agreement between repeat analyses is a measure of precision and is shown above in the column "% Difference from Mean". Repeat analyses are an important part of AtmAA's quality assurance program. The average % Difference from Mean for 7 repeat measurements from the one Tedlar bag sample is 1.7%.



APPENDIX C

INTEGRATED SURFACE EMISSION MONITORING

- Field Sheets
- Laboratory Analysis
- Sample Chain-of-Custody
- Integrated Sampling QA/QC Forms
- Instrumentation Calibration

BRADLEY LANDFILL

INTEGRATED LANDFILL SURFACE MONITORING

Personnel: Johnny Espinoza Juan Robledo
Ed Gutierrez Tim Lynch
BILL ROSS

Date: 1-20-05 Instrument Used: ISS PACKS/OVA 128

Temperature: 56°

| GRID ID | STAFF INITIALS | START TIME | STOP TIME | TOC PPM | ROTO-MTR, CC/MIN | WIND SPEED, MPH/DIRECT | REMARKS |
|---------|----------------|------------|-----------|---------|------------------|------------------------|---------|
| 20 | JE | 0800 | 0825 | 5 | .333 | 3-4 | |
| 22 | EG | 0800 | 0825 | 6 | | 3-4 | |
| 37 | BR | 0800 | 0825 | 4 | | 3-4 | |
| 34 | JR | 0800 | 0825 | 4 | | 3-4 | |
| 32 | TL | 0800 | 0825 | 5 | | 3-4 | |
| 21 | JE | 0830 | 0855 | 5 | | 3-4 | |
| 23 | EG | 0830 | 0855 | 5 | | 3-4 | |
| 39 | BR | 0830 | 0855 | 5 | | 3-4 | |
| 35 | JR | 0830 | 0855 | 5 | | 3-4 | |
| 33 | TL | 0830 | 0855 | 5 | | 3-4 | |
| 101 | EG | 0900 | 0925 | 5 | | 4-5 | |
| 104 | JE | 0900 | 0925 | 5 | | 4-5 | |
| 103 | BR | 0900 | 0925 | 5 | | 4-5 | |
| 108 | JR | 0900 | 0925 | 5 | | 4-5 | |
| 109 | TL | 0900 | 0925 | 5 | | 4-5 | |
| 102 | EG | 0930 | 0955 | 5 | | 4-5 | |
| 105 | JE | 0930 | 0955 | 5 | | 4-5 | |
| 106 | BR | 0930 | 0955 | 5 | | 4-5 | |
| 113 | JR | 0930 | 0955 | 5 | | 4-5 | |
| 110 | TL | 0930 | 0955 | 5 | | 4-5 | |
| 107 | EG | 1000 | 1025 | 5 | | 4-8 | |
| 112 | JE | 1000 | 1025 | 5 | | 4-8 | |
| 114 | BR | 1000 | 1025 | 5 | | 4-8 | |
| 116 | JR | 1000 | 1025 | 5 | | 4-8 | |
| 119 | TL | 1000 | 1025 | 5 | | 4-8 | |
| 111 | EG | 1030 | 1055 | 5 | | 3-5 | |
| 118 | JE | 1030 | 1055 | 5 | | 3-5 | |
| 115 | BR | 1030 | 1055 | 5 | | 3-5 | |
| 117 | JR | 1030 | 1055 | 5 | ✓ | 3-5 | |
| 120 | TL | 1030 | 1055 | 5 | | 3-5 | |

Attach Calibration Sheet
 Attach site map showing grid ID

INTEGRATED LANDFILL SURFACE MONITORING

JUAN ROBLED0

TIM LYNCH

BILL ROSS

Temperature: 59°

Attach site map showing grid ID

INTEGRATED LANDFILL SURFACE MONITORING

Craig Markley
Tim Lynch
Bill Ross

Ed Gutierrez
Juan Robledo
Jesus Sanchez

Yuki Yomashiro
Johnny Espinoza

Date: 3-2-05 Instrument Used: ISS 1-8

Temperature: _____

Page 2 of 2

BRADLEY LANDFILL

INTEGRATED LANDFILL SURFACE MONITORING

Personnel:

Craig Markley

Ed Gutierrez

Yuki Yamashiro

Tim Lynch

Juan Robledo

Johnny Espinoza

Bill Ross

Jesus Sanchez

Date: 3-2-05

Instrument Used:

ISS

1-8

Temperature:

60°

| GRID ID | STAFF INITIALS | START TIME | STOP TIME | TOC PPM | ROTO-MTR, CC/MIN | WIND SPEED, MPH/DIRECT | REMARKS |
|---------|----------------|------------|-----------|---------|------------------|------------------------|---------|
| 97 | CM | 1130 | 1155 | 5 | 1.333 | 3/16 | |
| 94 | TL | 1130 | 1155 | 5 | | 3/16 | |
| 88 | BR | 1130 | 1155 | 5 | | 3/16 | |
| 86 | EG | 1130 | 1155 | 5 | | 3/16 | |
| 82 | JR | 1130 | 1155 | 5 | | 3/16 | |
| 93 | JS | 1130 | 1155 | 5 | | 3/16 | |
| 77 | YY | 1130 | 1155 | 5 | | 3/16 | |
| 78 | JE | 1130 | 1155 | 5 | | 3/16 | |
| 75 | CM | 1200 | 1225 | 5 | | 3/2 | |
| 76 | TL | 1200 | 1225 | 5 | | 3/2 | |
| 70 | BR | 1200 | 1225 | 5 | | 3/2 | |
| 69 | EG | 1200 | 1225 | 5 | | 3/2 | |
| 56 | JR | 1200 | 1225 | 5 | | 3/2 | |
| 41 | JS | 1200 | 1225 | 5 | | 3/2 | |
| 42 | YY | 1200 | 1225 | 5 | | 3/2 | |
| 36 | JE | 1200 | 1225 | 5 | | 3/2 | |
| 38 | CM | 1230 | 1255 | 5 | | 3-4 | |
| 44 | TL | 1230 | 1255 | 5 | | 3-4 | |
| 48 | BR | 1230 | 1255 | 5 | | 3-4 | |
| 43 | EG | 1230 | 1255 | 5 | | 3-4 | |
| 50 | JR | 1230 | 1255 | 5 | | 3-4 | |
| 53 | JS | 1230 | 1255 | 5 | | 3-4 | |
| 57 | YY | 1230 | 1255 | 5 | | 3-4 | |
| 64 | JE | 1230 | 1255 | 5 | | 3-4 | |
| 67 | CM | 1300 | 1325 | 5 | | 4-4 | |
| 71 | TL | 1300 | 1325 | 5 | | 4-4 | |
| 79 | BR | 1300 | 1325 | 5 | | 4-4 | |
| 51 | EG | 1300 | 1325 | 5 | | 4-4 | |
| 54 | JR | 1300 | 1325 | 5 | | 4-4 | |
| 58 | JS | 1300 | 1325 | 5 | | 4-4 | |

Attach Calibration Sheet

Attach site map showing grid ID

INTEGRATED LANDFILL SURFACE MONITORING

Big Death

ISS 1-6

55

[illegible]

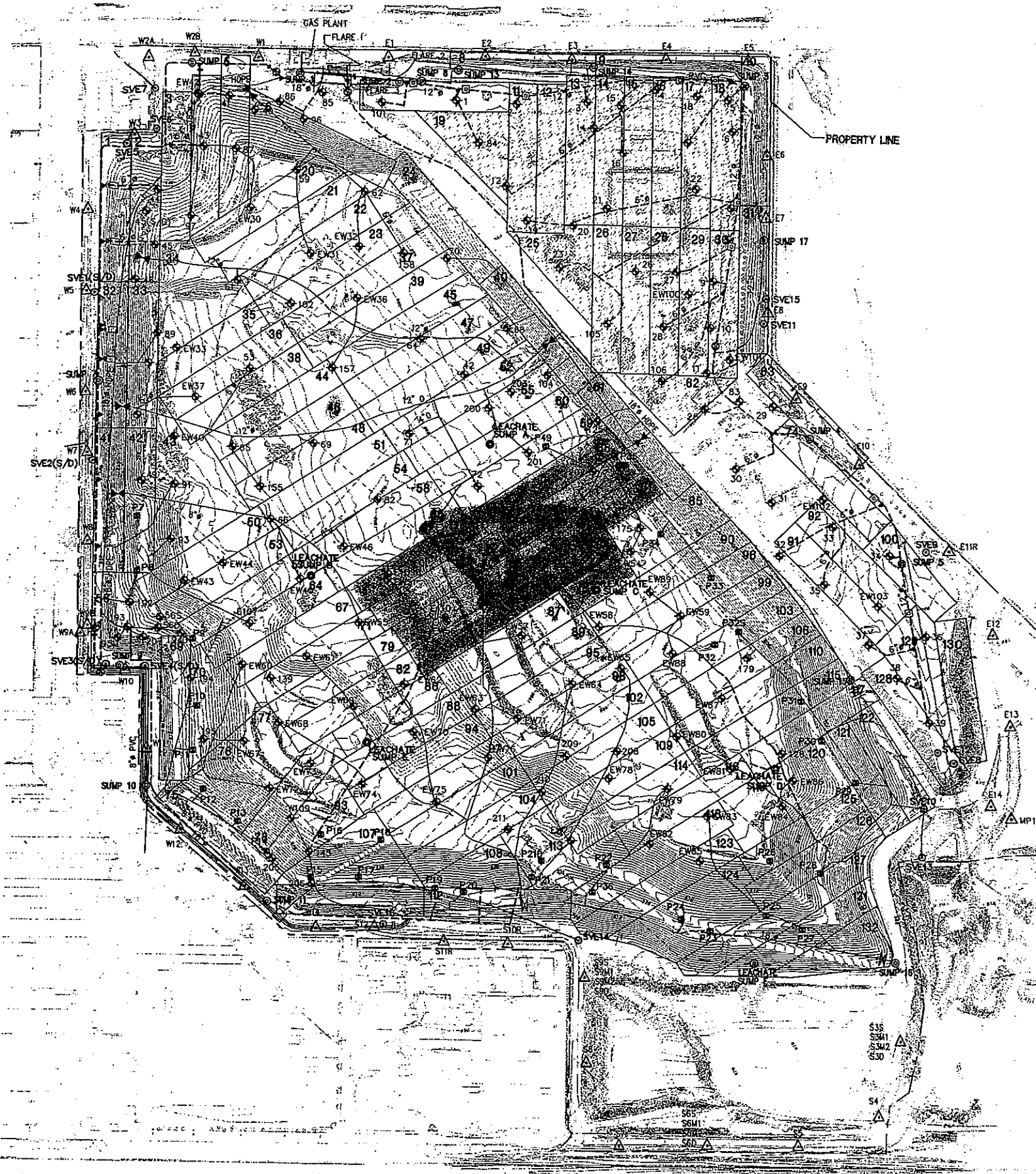
INTEGRATED LANDFILL SURFACE MONITORING

Craig Markley

Date: 3-22-05 Instrument Used: TSS

Temperature: _____

[illegible]Page 1 of 1





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LABORATORY ANALYSIS REPORT

environmental consultants
laboratory services

SCAQMD Rule 1150.1 Components Analysis in Integrated Surface Tedlar Bag Samples

Report Date: April 8, 2005

Client: Shaw Environmental

Project Location: Bradley Landfill

Date Received: March 24, 2005

Date Analyzed: March 24 & 25, 2005

| | | |
|----------------|----------|----------|
| AtmAA Lab No.: | 00835-14 | 00835-15 |
| Sample I.D.: | ISS | ISS |
| | Grid 20 | Grid 40 |

Components

(Concentration in ppmv)

| | | |
|---------|------|------|
| Methane | 5.95 | 7.06 |
| TGNMO | 1.75 | 1.98 |

(Concentration in ppbv)

| | | |
|-----------------------|------|------|
| Hydrogen sulfide | <50 | <50 |
| Benzene | 0.54 | 0.52 |
| Benzylchloride | <0.4 | <0.4 |
| Chlorobenzene | <0.1 | <0.1 |
| Dichlorobenzenes* | <1.1 | <1.1 |
| 1,1-dichloroethane | <0.1 | <0.1 |
| 1,2-dichloroethane | <0.1 | <0.1 |
| 1,1-dichloroethylene | <0.1 | <0.1 |
| Dichloromethane | 0.68 | 1.12 |
| 1,2-dibromoethane | <0.1 | <0.1 |
| Perchloroethylene | <0.1 | <0.1 |
| Carbon tetrachloride | 0.12 | 0.12 |
| Toluene | 4.76 | 7.19 |
| 1,1,1-trichloroethane | <0.1 | <0.1 |
| Trichloroethene | <0.1 | <0.1 |
| Chloroform | <0.1 | <0.1 |
| Vinyl chloride | <0.1 | <0.1 |
| m+p-xylenes | 1.28 | 1.56 |
| o-xylene | 0.53 | 0.57 |

TGNMO is total gaseous non-methane organics measured and reported as ppm methane.

* total amount containing meta, para, and ortho isomers

Michael L. Porter
Laboratory Director

QUALITY ASSURANCE SUMMARY
(Repeat Analyses)

Project Location: Bradley Landfill
Date Received: March 24, 2005
Date Analyzed: March 24 & 25, 2005

| Components | Sample ID | Repeat Analysis | | Mean Conc. | % Diff. From Mean |
|-------------------------|-----------|-----------------|--------|------------|-------------------|
| | | Run #1 | Run #2 | | |
| Methane | Grid 40 | 7.08 | 7.05 | 7.06 | 0.21 |
| TGNMO | Grid 40 | 1.94 | 2.02 | 1.98 | 2.0 |
| (Concentration in ppmv) | | | | | |
| Hydrogen sulfide | Grid 20 | <50 | <50 | --- | --- |
| Benzene | Grid 20 | 0.55 | 0.52 | 0.54 | 2.8 |
| Benzylchloride | Grid 20 | <0.4 | <0.4 | --- | --- |
| Chlorobenzene | Grid 20 | <0.1 | <0.1 | --- | --- |
| Dichlorobenzenes | Grid 20 | <1.1 | <1.1 | --- | --- |
| 1,1-dichloroethane | Grid 20 | <0.1 | <0.1 | --- | --- |
| 1,2-dichloroethane | Grid 20 | <0.1 | <0.1 | --- | --- |
| 1,1-dichloroethylene | Grid 20 | <0.1 | <0.1 | --- | --- |
| Dichloromethane | Grid 20 | 0.70 | 0.67 | 0.68 | 2.2 |
| 1,2-dibromoethane | Grid 20 | <0.1 | <0.1 | --- | --- |
| Perchloroethylene | Grid 20 | <0.1 | <0.1 | --- | --- |
| Carbon tetrachloride | Grid 20 | 0.12 | 0.12 | 0.12 | 0.0 |
| Toluene | Grid 20 | 4.81 | 4.71 | 4.76 | 1.0 |
| 1,1,1-trichloroethane | Grid 20 | <0.1 | <0.1 | --- | --- |
| Trichloroethene | Grid 20 | <0.1 | <0.1 | --- | --- |
| Chloroform | Grid 20 | <0.1 | <0.1 | --- | --- |
| Vinyl chloride | Grid 20 | <0.1 | <0.1 | --- | --- |
| m+p-xylenes | Grid 20 | 1.29 | 1.27 | 1.28 | 0.78 |
| o-xylene | Grid 20 | 0.52 | 0.54 | 0.53 | 1.9 |

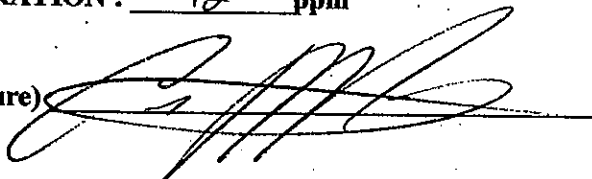
Two Tedlar bag samples, laboratory numbers 00835-(14 & 15), were analyzed for SCAQMD Rule 1150.1 components, methane, and total gaseous non-methane organics (TGNMO). Agreement between repeat analyses is a measure of precision and is shown above in the column "% Difference from Mean". Repeat analyses are an important part of AtmAA's quality assurance program. The average % Difference from Mean for 8 repeat measurements from two Tedlar bag samples is 1.4%.



[illegible]

RES**Environmental Inc.**LOCATION: Bradley Landfill**INTEGRATED SURFACE SAMPLING SHEET**GRID #: 20DATE: 3-22-05SAMPLE #: -FLOW START: .333 ccCLASS #: -FLOW STOP: .333 ccBAG #: -TIME START: 0930SAMPLER #: 1TIME STOP: 0955

WIND SPEED: _____

BAG STATUS:
☒ FULL ☐ $\frac{3}{4}$
☐ $\frac{1}{2}$ ☐ $\frac{1}{4}$ WIND
DIRECTION: _____ 16 ptMETHANE
CONCENTRATION: 12 ppmTechnician: (Signature) **THE TECHNICIAN WILL BE INSPECTING FOR THE FOLLOWING:**

- | | | |
|------------------------|----------------------------------|--------------|
| 1. SETTLEMENT CRACKS; | 2. SHRINKAGE CRACKS; | 3. SLUMPING; |
| 4. SURFACE DEPRESSION; | 5. EXCESSIVELY DRY OR WET AREAS; | |
| 6. RODENT BURROWS; | 7. COVER SOIL EROSIONS | |

COMMENTS: _____

LOCATION: Bedley Landfill

INTEGRATED SURFACE SAMPLING SHEET

GRID #: 40

DATE: 3-22-05

SAMPLE #: -

FLOW START: .333 cc

CLASS #: -

FLOW STOP: .333 cc

BAG #: -

TIME START: 0930

SAMPLER #: 2


TIME STOP: 0955

WIND SPEED: _____

BAG STATUS: ☒ FULL ☐ $\frac{3}{4}$
☐ $\frac{1}{2}$ ☐ $\frac{1}{4}$

WIND
DIRECTION: SW 16 pt

METHANE
CONCENTRATION: 5 ppm

Technician: (Signature) 

THE TECHNICIAN WILL BE INSPECTING FOR THE FOLLOWING:

- | | | |
|------------------------|----------------------------------|--------------|
| 1. SETTLEMENT CRACKS; | 2. SHRINKAGE CRACKS; | 3. SLUMPING; |
| 4. SURFACE DEPRESSION; | 5. EXCESSIVELY DRY OR WET AREAS; | |
| 6. RODENT BURROWS; | 7. COVER SOIL EROSIONS | |

COMMENTS: _____

RES

landfill: BRADLEY

[illegible]

APPENDIX D

INSTANTANEOUS SURFACE EMISSION MONITORING

- Field Sheets
- Instrumentation Calibration

BRADLEY LANDFILL

INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel:

Jesus Sanabria Bill Ross
Johnny Espinoza Tim Lynch
J Robledo

Date: Jun 19/05 Instrument Used: CVA

Temperature: 50°

| GRID ID | STAFF INITIALS | START TIME | STOP TIME | TOC PPM | REMARKS |
|---------|----------------|------------|-----------|---------|---------------------------------------|
| 112 | J.R. | 0730 | 0745 | 100000 | WELL # P19 |
| 108 | J.S. | 0730 | 0745 | 5 | |
| 113 | J.E. | 0730 | 0745 | 5000 | WELL # HCB (JUST BELOW P21) |
| 118 | B.R. | 0730 | 0745 | 5 | |
| 123 | T.L. | 0730 | 0745 | 5 | |
| 124 | T.L. | 0745 | 0800 | 5 | |
| 125 | B.R. | 0745 | 0800 | 5 | |
| 127 | J.S. | 0745 | 0800 | 1000 | # P25 |
| 131 | J.R. | 0745 | 0800 | 500 | # P27.5R |
| 132 | J.E. | 0745 | 0800 | 5 | |
| 120 | J.R. | 0800 | 0815 | 5 | |
| 121 | J.S. | 0800 | 0815 | 5 | |
| 122 | J.E. | 0800 | 0815 | 5 | |
| 117 | B.R. | 0800 | 0815 | 5 | |
| 115 | T.L. | 0800 | 0815 | 5 | |
| 110 | T.L. | 0815 | 0830 | 5 | |
| 106 | B.R. | 0815 | 0830 | 5 | |
| 103 | J.E. | 0815 | 0830 | 5 | |
| 99 | J.S. | 0815 | 0830 | 5 | |
| 96 | J.R. | 0815 | 0830 | 5 | |
| 90 | T.L. | 0830 | 0845 | 5 | |
| 85 | B.R. | 0830 | 0845 | 5 | |
| 61 | J.E. | 0830 | 0845 | 5 | |
| 40 | J.S. | 0830 | 0845 | 5 | |
| 24 | J.R. | 0830 | 0845 | 5 | |
| 11 | J.R. | 0845 | 0900 | 5000 | WELL # HCB (JUST BELOW P17) AND SLOPE |
| 107 | J.S. | 0845 | 0900 | 5 | |
| 97 | J.E. | 0845 | 0900 | 5 | |
| 101 | T.L. | 0845 | 0900 | 5 | |
| 104 | B.R. | 0845 | 0900 | 5 | |

Attach Calibration Sheet

Attach site map showing grid ID

BRADLEY LANDFILL

INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel:

Jesús Sambrina

Bill Ross

Johnny Espinoza

Tim Lynch

Juan Robledo

Date: Jan 19/03

Instrument Used: EVA

Temperature: 63°

| GRID ID | STAFF INITIALS | START TIME | STOP TIME | TOC PPM | REMARKS |
|---------|----------------|------------|-----------|---------|---------|
| 1 | J.S. | 0900 | 0915 | 5 | |
| 5 | J.E. | 0900 | 0915 | 5 | |
| 4 | J.R. | 0900 | 0915 | 5 | |
| 3 | B.R. | 0900 | 0915 | 5 | |
| 2 | T.L. | 0900 | 0915 | 5 | |
| 1 | J.S. | 0915 | 0930 | 5 | |
| 32 | J.E. | 0915 | 0930 | 5 | |
| 33 | J.R. | 0915 | 0930 | 5 | |
| 41 | B.R. | 0915 | 0930 | 5 | |
| 42 | T.L. | 0915 | 0930 | 5 | |
| 43 | J.S. | 0930 | 0945 | 5 | |
| 56 | J.E. | 0930 | 0945 | 5 | |
| 50 | J.R. | 0930 | 0945 | 5 | |
| 53 | B.R. | 0930 | 0945 | 5 | |
| 60 | T.L. | 0930 | 0945 | 5 | |
| 57 | T.L. | 0945 | 1000 | 5 | |
| 70 | B.R. | 0945 | 1000 | 5 | |
| 73 | J.R. | 0945 | 1000 | 5 | |
| 76 | J.E. | 0945 | 1000 | 5 | |
| 77 | J.S. | 0945 | 1000 | 5 | |
| 78 | J.S. | 1000 | 1015 | 5 | |
| 93 | J.E. | 1000 | 1015 | 5 | |
| 34 | J.R. | 1000 | 1015 | 5 | |
| 20 | T.L. | 1000 | 1015 | 5 | |
| 21 | BR | 1000 | 1015 | 5 | |
| 22 | J.R. | 1015 | 1030 | 5 | |
| 23 | J.E. | 1015 | 1030 | 5 | |
| 35 | J.S. | 1015 | 1030 | 5 | |
| 36 | BR | 1015 | 1030 | 5 | |
| 37 | TL | 1015 | 1030 | 5 | |

Attach Calibration Sheet

Attach site map showing grid ID

BRADLEY LANDFILL

INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel:

Jesus Sanchez

Bill Ross

Johnny Espinoza

Tim Lynch

Juan Robledo

Date: Jan 17 '03 Instrument Used: OVA

Temperature: 67°

| GRID ID | STAFF INITIALS | START TIME | STOP TIME | TOC PPM | REMARKS |
|---------|----------------|------------|-----------|---------|---------|
| 38 | TL | 1030 | 1045 | 5 | |
| 39 | BR | 1030 | 1045 | 5 | |
| 44 | JR | 1030 | 1045 | 5 | |
| 45 | JE | 1030 | 1045 | 5 | |
| 46 | JS | 1030 | 1045 | 5 | |
| 47 | JS | 1045 | 1100 | 5 | |
| 48 | JR | 1045 | 1100 | 5 | |
| 49 | JE | 1045 | 1100 | 5 | |
| 51 | TL | 1045 | 1100 | 5 | |
| 52 | BR | 1045 | 1100 | 5 | |
| 54 | JR | 1200 | 1215 | 5 | |
| 55 | JE | 1200 | 1215 | 5 | |
| 58 | BR | 1200 | 1215 | 5 | |
| 60 | JS | 1200 | 1215 | 5 | |
| 59 | TL | 1200 | 1215 | 5 | |
| 65 | BR | 1215 | 1230 | 5 | |
| 64 | JS | 1215 | 1230 | 5 | |
| 67 | TL | 1215 | 1230 | 5 | |
| 68 | JE | 1215 | 1230 | 5 | |
| 66 | JR | 1215 | 1230 | 5 | |
| 71 | BR | 1230 | 1245 | 5 | |
| 72 | JE | 1230 | 1245 | 5 | |
| 73 | JS | 1230 | 1245 | 5 | |
| 80 | JR | 1230 | 1245 | 5 | |
| 81 | TL | 1230 | 1245 | 5 | |
| 79 | BR | 1245 | 1:00 | 5 | |
| 82 | TL | 1245 | 1:00 | 5 | |
| 86 | JS | 1245 | 1:00 | 5 | |
| 88 | JR | 1245 | 1:00 | 5 | |
| 94 | JE | 1245 | 1:00 | 5 | |

Attach Calibration Sheet

Attach site map showing grid ID

INSTANTANEOUS LANDFILL SURFACE MONITORING

Temperature: 78°

[illegible]

INSTANTANEOUS LANDFILL SURFACE MONITORING

Craig Markley

Instrument Used:

[illegible]

Attach Calibration Sheet
Attach site map showing grid ID

LOG OF REMEDIAL WORK FOR INSTANTANEOUS SURFACE MONITORING

Site Name: Bradley Landfill Monitoring Period: 1-19-05 Personnel: Tim Lynch

[illegible]

1. Monitoring Date
2. TOC Reading in PPM

Signature _____

RES

ENVIRONMENTAL INC.

OVA CALIBRATION LOG

Landfill:

BRADLEY

[illegible]

BRADLEY LANDFILL

INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel:

Craig Markley
Tim Lynch
Dill Ross

JESUS Sanchez
Juan Gutierrez
Johnny Espinoza

Date: 2-23-05 Instrument Used: OVA-125-84

Temperature: 55°

| GRID ID | STAFF INITIALS | START TIME | STOP TIME | TOC PPM | REMARKS |
|---------|----------------|------------|-----------|---------|------------|
| 75 | CM | 0715 | 0730 | 5 | |
| 111 | TL | 0715 | 0730 | 5 | |
| 112 | BR | 0715 | 0730 | 5 | |
| 77 | JS | 0715 | 0730 | 5 | |
| 78 | JL | 0715 | 0730 | 5 | |
| 93 | JE | 0715 | 0730 | 5,000 | Well # 205 |
| 107 | CM | 0730 | 0745 | 5 | |
| 108 | TL | 0730 | 0745 | 5 | |
| 76 | BR | 0730 | 0745 | 5 | |
| 101 | JS | 0730 | 0745 | 5 | |
| 104 | JL | 0730 | 0745 | 5 | |
| 113 | JE | 0730 | 0745 | 5 | |
| 105 | CM | 0745 | 0800 | 5 | |
| 109 | TL | 0745 | 0800 | 5 | |
| 114 | BR | 0745 | 0800 | 5 | |
| 116 | JS | 0745 | 0800 | 5 | |
| 118 | JL | 0745 | 0800 | 5 | |
| 119 | JE | 0745 | 0800 | 5 | |
| 120 | CM | 0800 | 0815 | 5 | |
| 125 | TL | 0800 | 0815 | 5 | |
| 126 | BR | 0800 | 0815 | 5 | |
| 123 | JS | 0800 | 0815 | 5 | |
| 124 | JL | 0800 | 0815 | 5 | |
| 117 | JE | 0800 | 0815 | 5 | |
| 121 | CM | 0815 | 0830 | 5 | |
| 122 | TL | 0815 | 0830 | 5 | |
| 127 | BR | 0815 | 0830 | 5 | |
| 131 | JS | 0815 | 0830 | 5 | |
| 132 | JL | 0815 | 0830 | 5 | |
| 115 | JE | 0815 | 0830 | 5 | |

Attach Calibration Sheet

Attach site map showing grid ID

Page 1 of 4

BRADLEY LANDFILL

INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel:

Craig Markley

Jesus Sanchez

Tim Luyeh

Juan Gutierrez

Bill Ross

Johnny Espinoza

Date: 2-23-05 Instrument Used: OVA - 128-88

Temperature: _____

| GRID ID | STAFF INITIALS | START TIME | STOP TIME | TOC PPM | REMARKS |
|---------|----------------|------------|-----------|---------|------------------------------|
| 110 | CM | 0830 | 0845 | 5 | |
| 106 | TL | 0830 | 0845 | 1000 | A BRP Few Feet From Well 179 |
| 103 | BR | 0830 | 0845 | 5 | |
| 99 | JS | 0830 | 0845 | 5 | |
| 96 | JG | 0830 | 0845 | 5 | |
| 90 | JE | 0830 | 0845 | 5 | |
| 84 | CM | 0845 | 0900 | 5 | |
| 85 | TL | 0845 | 0900 | 5 | |
| 81 | BR | 0845 | 0900 | 5 | |
| 62 | JS | 0845 | 0900 | 5 | |
| 63 | JG | 0845 | 0900 | 5 | |
| 74 | JE | 0845 | 0900 | 5 | |
| 100 | CM | 0900 | 0915 | 5 | |
| 92 | TL | 0900 | 0915 | 5 | |
| 91 | BR | 0900 | 0915 | 5 | |
| 130 | JS | 0900 | 0915 | 5 | |
| 129 | JG | 0900 | 0915 | 5 | |
| 128 | JE | 0900 | 0915 | 5 | |
| 97 | CM | 0915 | 0930 | 5 | |
| 94 | TL | 0915 | 0930 | 5 | |
| 88 | BR | 0915 | 0930 | 5 | |
| 82 | JS | 0915 | 0930 | 5 | |
| 79 | JG | 0915 | 0930 | 5 | |
| 83 | JE | 0915 | 0930 | 5 | |
| 80 | CM | 0930 | 0945 | 5 | |
| 72 | TL | 0930 | 0945 | 5 | |
| 73 | BR | 0930 | 0945 | 5 | |
| 70 | JS | 0930 | 0945 | 5 | |
| 71 | JG | 0930 | 0945 | 5 | |
| 67 | JE | 0930 | 0945 | 5 | |

Attach Calibration Sheet

Attach site map showing grid ID

Page 2 of 4

BRADLEY LANDFILL

INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel:

Craig Markley

Jesse Sanchez

Tim Lynch

Juan Gutierrez

Bill Bass

Johnny Espinoza

Date: 2-23-05 Instrument Used: OVA 128-88

Temperature: _____

| GRID ID | STAFF INITIALS | START TIME | STOP TIME | TOC PPM | REMARKS |
|---------|----------------|------------|-----------|---------|-------------|
| 1 | CM | 0945 | 1000 | 5 | |
| 2 | TZ | 0945 | 1000 | 5 | |
| 3 | BR | 0945 | 1000 | 5 | |
| 4 | JS | 0945 | 1000 | 100,000 | Well # 43 |
| 5 | JG | 0945 | 1000 | 1,000 | Well # 87 |
| 6 | JE | 0945 | 1000 | 5 | |
| 7 | CM | 1000 | 1015 | 5 | |
| 8 | TZ | 1000 | 1015 | 5 | |
| 9 | BR | 1000 | 1015 | 5 | |
| 10 | JS | 1000 | 1015 | 5 | |
| 31 | JL | 1000 | 1015 | 5 | |
| 32 | JE | 1000 | 1015 | 5 | |
| 33 | CM | 1015 | 1030 | 5 | |
| 41 | TZ | 1015 | 1030 | 5 | |
| 42 | BR | 1015 | 1030 | 5 | |
| 56 | JS | 1015 | 1030 | 5 | |
| 69 | JL | 1015 | 1030 | 5 | |
| 24 | JE | 1015 | 1030 | 5 | |
| 40 | CM | 1030 | 1045 | 5 | |
| 61 | TZ | 1030 | 1045 | 5 | |
| 20 | BR | 1030 | 1045 | 1,000 | Well # EW30 |
| 21 | JS | 1030 | 1045 | 5 | |
| 22 | JL | 1030 | 1045 | 5 | |
| 23 | JE | 1030 | 1045 | 5 | |
| 37 | CM | 1045 | 1100 | 5 | |
| 39 | TZ | 1045 | 1100 | 5 | |
| 45 | BR | 1045 | 1100 | 5 | |
| 47 | JS | 1045 | 1100 | 5 | |
| 49 | JL | 1045 | 1100 | 5 | |
| 52 | JE | 1045 | 1100 | 5 | |

Attach Calibration Sheet

Attach site map showing grid ID

Page 3 of 4

INSTANTANEOUS LANDFILL SURFACE MONITORING

Tobacco Escapes

Date: 1-23-05 Instrument Used: OVA 128-88

[illegible]Page 4 of 4

INSTANTANEOUS LANDFILL SURFACE MONITORING

Craig Markley

Temperature: _____

[illegible]

Page _____ of _____

Site Name: Berkeley Coast Monitoring Period: 2-23-05 Personnel: Craig Markley

[illegible]

- Signature: _____

Personnel: Craig Mackley

Signature: _____

OVA CALIBRATION LOG

Landfill:

Bradley Landfill

03/07/2005 12:19 FAX

BRADLEY LANDFILL

INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: Craig Mackley Yuki Yamashiro
Tim Lynch Bib Darr
Ed Gutierrez Johnny Espinoza

Date: 3-22-05 Instrument Used: OVA 128-88

Temperature: 55°

| GRID ID | STAFF INITIALS | START TIME | STOP TIME | TOC PPM | REMARKS |
|---------|----------------|------------|-----------|---------|-------------------------------------------|
| 20 | CM | 0830 | 0845 | 5 | |
| 21 | TL | 0830 | 0845 | 5 | |
| 22 | EG | 0830 | 0845 | 5 | |
| 23 | YY | 0830 | 0845 | 5 | |
| 24 | DD | 0830 | 0845 | 5 | |
| 37 | JE | 0830 | 0845 | 5 | |
| 40 | CM | 0845 | 0900 | 5 | |
| 61 | TL | 0845 | 0900 | 10,000 | lines of flags on slope upper mid section |
| 39 | EG | 0845 | 0900 | 5 | |
| 45 | YY | 0845 | 0900 | 5 | |
| 47 | BD | 0845 | 0900 | 5 | |
| 49 | JE | 0845 | 0900 | 5 | |
| 52 | CM | 0900 | 0915 | 5 | |
| 55 | TL | 0900 | 0915 | 5 | |
| 60 | EG | 0900 | 0915 | 5 | |
| 59 | YY | 0900 | 0915 | 1,000 | Well 201 and P. 49 |
| 85 | DD | 0900 | 0915 | 10,000 | Well P-34, and All of slope Below well |
| 90 | JE | 0900 | 0915 | 5 | |
| 96 | CM | 0915 | 0930 | 5,000 | Well P-33 and well EW-59 |
| 99 | TL | 0915 | 0930 | 1,000 | Well EW 88 |
| 103 | EG | 0915 | 0930 | 5 | |
| 106 | YY | 0915 | 0930 | 5 | |
| 110 | BD | 0915 | 0930 | 1,000 | Well EW 87 |
| 115 | JE | 0915 | 0930 | 5 | |
| 117 | CM | 0930 | 0945 | 10,000 | Well P-66 |
| 122 | TL | 0930 | 0945 | 5 | |
| 121 | EG | 0930 | 0945 | 5 | |
| 87 | YY | 0930 | 0945 | 5 | |
| 89 | BD | 0930 | 0945 | 5 | |
| 95 | JE | 0930 | 0945 | 5 | |

Attach Calibration Sheet
 Attach site map showing grid ID

BRADLEY LANDFILL

INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel:

Craig Morley

Yuki Yamashiro

Tim Lopez

Bih Danh

Ed Gutierrez

Johnny Espinoza

Date: 3-22-05

Instrument Used:

OVA 128-58

Temperature: _____

| GRID ID | STAFF INITIALS | START TIME | STOP TIME | TOC PPM | REMARKS |
|---------|----------------|------------|-----------|---------|----------------------------------|
| 98 | CM | 0945 | 1000 | 5 | |
| 102 | TL | 0945 | 1000 | 5 | |
| 105 | EG | 0945 | 1000 | 5 | |
| 109 | YY | 0945 | 1000 | 5 | |
| 114 | BD | 0945 | 1000 | 5 | |
| 116 | JE | 0945 | 1000 | 1,000 | Well FW 81 |
| 120 | CM | 1000 | 1015 | 5 | |
| 118 | TL | 1000 | 1015 | 1,000 | Well P-36 |
| 119 | EG | 1000 | 1015 | 5 | |
| 123 | YY | 1000 | 1015 | 5 | |
| 124 | BD | 1000 | 1015 | 5 | |
| 125 | JE | 1000 | 1015 | 5 | |
| 126 | CM | 1015 | 1030 | 5,000 | Well no number, above well P-25, |
| 127 | TL | 1015 | 1030 | 5 | |
| 131 | EG | 1015 | 1030 | 100,000 | Scmp F |
| 132 | YY | 1015 | 1030 | 100,000 | Well next to Scmp 16 |
| 1 | BD | 1015 | 1030 | 5 | |
| 2 | JE | 1015 | 1030 | 5 | |
| 3 | CM | 1030 | 1045 | 5 | |
| 4 | TL | 1030 | 1045 | 5 | |
| 5 | EG | 1030 | 1045 | 5 | |
| 6 | YY | 1030 | 1045 | 5 | |
| 7 | BD | 1030 | 1045 | 5 | |
| 8 | JE | 1030 | 1045 | 5 | |
| 9 | CM | 1045 | 1100 | 5 | |
| 10 | TL | 1045 | 1100 | 5 | |
| 31 | EG | 1045 | 1100 | 5 | |
| 62 | YY | 1045 | 1100 | 5 | |
| 63 | BD | 1045 | 1100 | 5 | |
| 74 | JE | 1045 | 1100 | 5 | |

Attach Calibration Sheet

Attach site map showing grid ID

BRADLEY LANDFILL

INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel:

Craig Madley

Yuki Yamashiro

Tim Lynch

Bib Rank

Ed Gutierrez

Johnny Espinoza

Date: 3-22-05

Instrument Used:

OHA 128-88

Temperature: _____

| GRID ID | STAFF INITIALS | START TIME | STOP TIME | TOC PPM | REMARKS |
|---------|----------------|------------|-----------|---------|--------------------------------------|
| 64 | CM | 1100 | 1115 | 10000 | Sump B |
| 67 | TL | 1100 | 1115 | 5 | |
| 71 | EG | 1100 | 1115 | 5 | |
| 79 | YY | 1100 | 1115 | 5 | |
| 82 | BD | 1100 | 1115 | 5 | |
| 86 | JE | 1100 | 1115 | 5 | |
| 88 | CM | 1115 | 1130 | 5 | |
| 94 | TL | 1115 | 1130 | 5 | |
| 97 | EG | 1115 | 1130 | 5 | |
| 101 | YY | 1115 | 1130 | 5 | |
| 104 | BD | 1115 | 1130 | 5 | |
| 113 | JE | 1115 | 1130 | 1000 | Well P-21 and line of flags on slope |
| 111 | CM | 1130 | 1145 | 5 | |
| 112 | TL | 1130 | 1145 | 10000 | Sump No Number, well P-20 and slope |
| 108 | EG | 1130 | 1145 | 1000 | next to P-19, and slope |
| 107 | YY | 1130 | 1145 | 5 | |
| 75 | BD | 1130 | 1145 | 5 | |
| 78 | JE | 1130 | 1145 | 5 | |
| 93 | CM | 1145 | 1200 | 5 | |
| 76 | TL | 1145 | 1200 | 5 | |
| 77 | EG | 1145 | 1200 | 5 | |
| 91 | YY | 1145 | 1200 | 5 | |
| 92 | BD | 1145 | 1200 | 5 | |
| 100 | JE | 1145 | 1200 | 5 | |
| 128 | CM | 1200 | 1215 | 5 | |
| 130 | TL | 1200 | 1215 | 5 | |
| 129 | EG | 1200 | 1215 | 5 | |
| 34 | YY | 1200 | 1215 | 5 | |
| 35 | BD | 1200 | 1215 | 5 | |
| 36 | JE | 1200 | 1215 | 5 | |

Attach Calibration Sheet

Attach site map showing grid ID

BRADLEY LANDFILL

INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel:

Craig Markley

Yoko Yamashiro

Tim Lynch

Bill Darr

Ed Gutierrez

Johnny Espinoza

Date: 3-22-05 Instrument Used: OVA 128/FR

Temperature: _____

| GRID ID | STAFF INITIALS | START TIME | STOP TIME | TOC PPM | REMARKS |
|---------|----------------|------------|-----------|---------|------------|
| 38 | CM | 1215 | 1230 | 5 | |
| 44 | TL | 1215 | 1230 | 5 | |
| 46 | EL | 1215 | 1230 | 5 | |
| 48 | YY | 1215 | 1230 | 1,000 | Well # 69 |
| 51 | BD | 1215 | 1230 | 5 | |
| 54 | JE | 1215 | 1230 | 5 | |
| 58 | CM | 1230 | 1245 | 1,000 | Well EW 46 |
| 65 | TL | 1230 | 1245 | 5 | |
| 32 | EL | 1230 | 1245 | 5 | |
| 33 | YY | 1230 | 1245 | 5 | |
| 41 | BD | 1230 | 1245 | 5 | |
| 42 | JE | 1230 | 1245 | 5 | |
| 50 | CM | 1245 | 1300 | 5 | |
| 53 | TL | 1245 | 1300 | 5 | |
| 57 | EL | 1245 | 1300 | 5 | |
| 56 | YY | 1245 | 1300 | 5 | |
| 69 | BD | 1245 | 1300 | 5 | |
| 70 | JE | 1245 | 1300 | 5 | |
| 11 | CM | 1300 | 1315 | 5 | |
| 12 | TL | 1300 | 1315 | 5 | |
| 13 | EL | 1300 | 1315 | 5 | |
| 14 | YY | 1300 | 1315 | 5 | |
| 15 | BD | 1300 | 1315 | 5 | |
| 16 | JE | 1300 | 1315 | 5 | |
| 17 | CM | 1315 | 1330 | 5 | |
| 18 | TL | 1315 | 1330 | 5 | |
| 25 | EL | 1315 | 1330 | 5 | |
| 26 | YY | 1315 | 1330 | 5 | |
| 27 | BD | 1315 | 1330 | 5 | |
| 28 | JE | 1315 | 1330 | 5 | |

Attach Calibration Sheet

Attach site map showing grid ID

INSTANTANEOUS LANDFILL SURFACE MONITORING

Craig Markley
Tim Lujan
Ed Gutierrez

Johnny Espinoza
Bik Darh
Yuki Yamashiro

Temperature: _____

Attach Calibration Sheet
Attach site map showing grid ID

LOG OF REMEDIAL WORK FOR INSTANTANEOUS SURFACE MONITORING

Site Name: Bradley

Monitoring Period: 3-22-05

Personnel: Craig Mackley

[illegible]

1. Monitoring Date
2. TOC Reading in PPM

~~Signature:~~

APPENDIX E

LANDFILL GAS SAMPLING

- Laboratory Analysis
- Chain-of-Custody



AtmAA Inc.

23917 Craftsman Rd., Calabasas, CA 91302 • (818) 223-3277 • FAX (818) 223-8250

environmental consultants
laboratory services

LABORATORY ANALYSIS REPORT

Hydrogen Sulfide, Reduced Sulfur Compounds, and BTU
Analysis in Landfill Gas Tedlar Bag Samples

Report Date: February 1, 2005
Client: Shaw Environmental
Project Location: Bradley Landfill
Client Project No.: 108341.01
Date Received: January 21, 2005
Date Analyzed: January 21, 2005

ANALYSIS DESCRIPTION

Hydrogen sulfide was analyzed by gas chromatography with a Hall electrolytic conductivity detector operated in the oxidative sulfur mode. All other sulfur components were measured by GC/Mass Spec. BTU is calculated from methane, which was measured by thermal conductivity detection/gas chromatography (TCD/GC), and total gaseous non-methane organics (TGNMO), which was measured by flame ionization detection/total combustion analysis (FID/TCA).

| | | | |
|----------------------|-------------------------|---------|---------|
| AtmAA Lab No.: | 00215-1 | 00215-2 | 00215-3 |
| Sample I.D.: | Flare 3 | Flare 1 | Flare 2 |
| | BL-002 | BL-003 | BL-004 |
| Components | (Concentration in ppmv) | | |
| Hydrogen sulfide | 8.76 | 38.8 | 31.8 |
| Carbonyl sulfide | 0.18 | 0.33 | <0.08 |
| Methyl mercaptan | 1.59 | 4.46 | 0.51 |
| Ethyl mercaptan | <0.1 | <0.1 | <0.1 |
| Dimethyl sulfide | 4.86 | 6.52 | 0.48 |
| Carbon disulfide | <0.06 | 0.077 | 0.11 |
| iso-propyl mercaptan | 0.062 | 0.36 | <0.06 |
| n-propyl mercaptan | <0.06 | <0.06 | <0.06 |
| Dimethyl disulfide | 0.28 | 0.24 | 0.077 |
| TRS | 16.0 | 51.1 | 33.2 |
| BTU / ft.3 | 219 | 442 | 293 |

TRS - total reduced sulfur

Michael L. Porter
Laboratory Director

QUALITY ASSURANCE SUMMARY
(Repeat Analyses)

Project Location: Bradley Landfill
Date Received: January 21, 2005
Date Analyzed: January 21, 2005

| Components | Sample ID | Repeat Analysis | | Mean Conc. | % Diff. From Mean |
|----------------------|-----------|-------------------------|--------|------------|-------------------|
| | | Run #1 | Run #2 | | |
| | | (Concentration in ppmv) | | | |
| Hydrogen sulfide | Flare 3 | 8.55 | 8.97 | 8.76 | 2.4 |
| | Flare 1 | 39.1 | 38.6 | 38.8 | 0.64 |
| | Flare 2 | 31.8 | 31.9 | 31.8 | 0.16 |
| Carbonyl sulfide | Flare 3 | 0.18 | 0.18 | 0.18 | 0.0 |
| Methyl mercaptan | Flare 3 | 1.58 | 1.60 | 1.59 | 0.63 |
| Ethyl mercaptan | Flare 3 | <0.1 | <0.1 | --- | --- |
| Dimethyl sulfide | Flare 3 | 4.90 | 4.83 | 4.86 | 0.72 |
| Carbon disulfide | Flare 3 | <0.06 | <0.06 | --- | --- |
| iso-propyl mercaptan | Flare 3 | 0.062 | 0.062 | 0.062 | 0.0 |
| n-propyl mercaptan | Flare 3 | <0.06 | <0.06 | --- | --- |
| Dimethyl disulfide | Flare 3 | 0.27 | 0.28 | 0.28 | 1.8 |

A set of three Tedlar bag samples, laboratory numbers 00215-(1-3), was analyzed for hydrogen sulfide, reduced sulfur compounds, and BTU. Agreement between repeat analysis is a measure of precision and is shown above in the column "% Difference from Mean". Repeat analyses are an important part of AtmAA's quality assurance program. The average % Difference from Mean for 8 repeat measurements from the sample set of three Tedlar bag samples is 0.79%.





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laboratory services

LABORATORY ANALYSIS REPORT

Permanent Gases, Total Gaseous Non- Methane Organics (TGNMO), and BTU
Analysis in Landfill Gas Tedlar Bag Samples


Report Date: March 3, 2005
Client: Shaw Environmental
Project Location: Bradley Landfill
Client Project No.: 108341.01
Date Received: February 17, 2005
Date Analyzed: February 17 & 18, 2005

ANALYSIS DESCRIPTION

Permanent gases were measured by thermal conductivity detection/gas chromatography (TCD/GC). Total gaseous non-methane organics (TGNMO) was measured by flame ionization detection/total combustion analysis (FID/TCA), EPA Method 25. BTU is calculated from methane, which was measured by thermal conductivity detection/gas chromatography (TCD/GC), and total gaseous non-methane organics (TGNMO), which was measured by flame ionization detection/total combustion analysis (FID/TCA).

| | | | |
|-----------------------|-------------------------|----------|----------|
| AtmAA Lab No.: | 00485-39 | 00485-40 | 00485-41 |
| Sample I.D.: | Flare #3 | Flare #1 | Flare #2 |
| | BL-001 | BL-002 | BL-003 |
| Components | (Concentration in %,v) | | |
| Nitrogen | 39.4 | 12.4 | 37.8 |
| Oxygen | 5.29 | 1.20 | 2.38 |
| Methane | 27.7 | 46.0 | 29.9 |
| Carbon dioxide | 25.4 | 37.8 | 27.6 |
| | (Concentration in ppmv) | | |
| TGNMO | 3140 | 5720 | 1900 |
| BTU/ ft. ³ | 282 | 469 | 304 |

The reported oxygen concentration includes any argon present in the sample. Calibration is based on a standard atmosphere containing 20.95% oxygen and 0.93% argon. The accuracy of permanent gas analysis by TCD/GC is +/- 2%, actual results are reported. TGNMO is total gaseous non-methane organics measured and reported as ppm methane.


Michael L. Porter
Laboratory Director

QUALITY ASSURANCE SUMMARY
(Repeat Analyses)

Project Location: Bradley Landfill
Date Received: February 17, 2005
Date Analyzed: February 17 & 18, 2005

| Components | Sample ID | Repeat Analysis | | Mean Conc. | % Diff. From Mean |
|-------------------------|-----------|-----------------|--------|------------|-------------------|
| | | Run #1 | Run #2 | | |
| (Concentration in %,v) | | | | | |
| Nitrogen | Flare #1 | 12.4 | 12.3 | 12.4 | 0.40 |
| Oxygen | Flare #1 | 1.19 | 1.21 | 1.20 | 0.83 |
| Methane | Flare #1 | 46.1 | 46.0 | 46.0 | 0.11 |
| Carbon dioxide | Flare #1 | 37.8 | 37.7 | 37.8 | 0.13 |
| (Concentration in ppmv) | | | | | |
| TGNMO | Flare #3 | 3000 | 3280 | 3140 | 4.4 |

Three Tedlar bag samples, laboratory numbers 00485-(39-41), were analyzed for permanent gases and TGNMO. Agreement between repeat analyses is a measure of precision and is shown above in the column "% Difference from Mean". Repeat analyses are an important part of AtmAA's quality assurance program. The average % Difference from Mean for 5 repeat measurements from the three Tedlar bag samples is 1.2%.





AtmAA Inc.

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LABORATORY ANALYSIS REPORT

environmental consultants
laboratory services

TO-14 Components and Acrylonitrile Analysis in Landfill Gas Tedlar Bag Samples

Report Date: March 3, 2005

Client: Shaw Environmental


Project Location: Bradley Landfill

Client Project No.: 108341.01

Date Received: February 17, 2005

Date Analyzed: February 17 & 18, 2005

| AtmAA Lab No.: Sample ID: | 00485-39 Flare #3 BL-001 | 00485-40 Flare #1 BL-002 | 00485-41 Flare #2 BL-003 |
|------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Components | (Concentrations in ppbv) | | |
| Freon-12 | 728 | 2100 | 176 |
| -Methyl chloride | 740 | 257 | 158 |
| Freon-114 | 83.2 | 148 | 59.8 |
| -Vinyl chloride | 371 | 171 | 626 |
| Methyl bromide | <40 | <40 | <40 |
| -Ethyl chloride | 63.8 | 134 | <40 |
| Freon-11 | 36.2 | 93.6 | <30 |
| -1,1-dichloroethylene | 41.8 | 79.1 | <30 |
| -Dichloromethane | 187 | 845 | <30 |
| Freon-113 | <30 | <30 | <30 |
| -1,1-dichloroethane | 136 | 282 | 69.9 |
| c-1,2-dichloroethene | 711 | 1080 | 690 |
| -Chloroform | <20 | <20 | <20 |
| -1,2-dichloroethane | 35.8 | 82.2 | 23.1 |
| -1,1,1-trichloroethane | <20 | <20 | <20 |
| -Benzene | 8770 | 4120 | 1270 |
| -Carbon tetrachloride | <30 | <30 | <30 |
| -1,2-dichloropropane | 45.1 | 55.1 | 25.2 |
| -Trichloroethene | 250 | 737 | 142 |
| t-1,3-dichloropropene | <30 | <30 | <30 |
| c-1,3-dichloropropene | <30 | <30 | <30 |
| 1,1,2-trichloroethane | <30 | <30 | <30 |
| -Toluene | 12000 | 32800 | 4970 |
| -1,2-dibromoethane | <30 | <30 | <30 |
| -Perchloroethylene | 476 | 1670 | 386 |
| -Chlorobenzene | 80.4 | 162 | 216 |
| -Ethylbenzene | 2500 | 6420 | 3680 |
| -m+p-xylenes | 2600 | 10900 | 5310 |
| Styrene | 101 | 845 | 314 |
| -1,1,2,2-tetrachloroethane | <30 | <30 | <30 |
| -o-xylene | 817 | 3650 | 2170 |
| 4-ethyl-toluene | 208 | 1320 | 973 |
| 1,3,5-trimethylbenzene | 92.4 | 683 | 539 |
| 1,2,4-trimethylbenzene | 164 | 1580 | 1390 |
| -m-dichlorobenzene | <20 | <20 | <20 |
| -p-dichlorobenzene | <30 | 502 | 415 |
| Benzylchloride | <40 | <40 | <40 |
| -o-dichlorobenzene 1,4 | <20 | 49.2 | 42.0 |
| 1,2,4-trichlorobenzene | <60 | <60 | <60 |
| Hexachlorobutadiene | <50 | <50 | <50 |
| -Acrylonitrile | <150 | <150 | <150 |


Michael L. Porter
Laboratory Director

QUALITY ASSURANCE SUMMARY
(Repeat Analyses)

Project Location: Bradley Landfill
Date Received: February 17, 2005
Date Analyzed: February 17 & 18, 2005

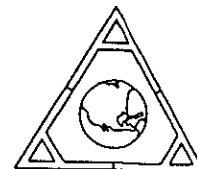
| Components | Sample ID | Repeat Analysis | | Mean Conc. | % Diff. From Mean |
|-----------------------|-----------|-------------------------|--------|------------|-------------------|
| | | Run #1 | Run #2 | | |
| | | (Concentration in ppbv) | | | |
| Freon-12 | Flare #3 | 731 | 726 | 728 | 0.34 |
| Methyl chloride | Flare #3 | 743 | 737 | 740 | 0.40 |
| Freon-114 | Flare #3 | 81.1 | 85.2 | 83.2 | 2.5 |
| Vinyl chloride | Flare #3 | 373 | 369 | 371 | 0.54 |
| Methyl bromide | Flare #3 | <40 | <40 | --- | --- |
| Ethyl chloride | Flare #3 | 62.2 | 65.3 | 63.8 | 2.4 |
| Freon-11 | Flare #3 | 36.4 | 36.1 | 36.2 | 0.41 |
| 1,1-dichloroethylene | Flare #3 | 42.6 | 41.0 | 41.8 | 1.9 |
| Dichloromethane | Flare #3 | 188 | 186 | 187 | 0.53 |
| Freon-113 | Flare #3 | <30 | <30 | --- | --- |
| 1,1-dichloroethane | Flare #3 | 140 | 133 | 136 | 2.6 |
| c-1,2-dichloroethene | Flare #3 | 713 | 709 | 711 | 0.28 |
| Chloroform | Flare #3 | <20 | <20 | --- | --- |
| 1,2-dichloroethane | Flare #3 | 35.9 | 35.6 | 35.8 | 0.42 |
| 1,1,1-trichloroethane | Flare #3 | <20 | <20 | --- | --- |
| Benzene | Flare #3 | 8670 | 8870 | 8770 | 1.1 |
| Carbon tetrachloride | Flare #3 | <30 | <30 | --- | --- |
| 1,2-dichloropropane | Flare #3 | 46.4 | 43.8 | 45.1 | 2.9 |
| Trichloroethene | Flare #3 | 249 | 251 | 250 | 0.40 |
| t-1,3-dichloropropene | Flare #3 | <30 | <30 | --- | --- |
| c-1,3-dichloropropene | Flare #3 | <30 | <30 | --- | --- |
| 1,1,2-trichloroethane | Flare #3 | <30 | <30 | --- | --- |



QUALITY ASSURANCE SUMMARY
(Repeat Analyses)
(continued)

| Components | Sample ID | Repeat Analysis | | Mean Conc. | % Diff. From Mean |
|---------------------------|-----------|-------------------------|--------|------------|-------------------|
| | | Run #1 | Run #2 | | |
| | | (Concentration in ppbv) | | | |
| Toluene | Flare #3 | 12000 | 11900 | 12000 | 0.42 |
| 1,2-dibromoethane | Flare #3 | <30 | <30 | --- | --- |
| Perchloroethylene | Flare #3 | 477 | 475 | 476 | 0.21 |
| Chlorobenzene | Flare #3 | 81.1 | 79.8 | 80.4 | 0.81 |
| Ethylbenzene | Flare #3 | 2510 | 2480 | 2500 | 0.60 |
| m+p-xylenes | Flare #3 | 2620 | 2590 | 2600 | 0.58 |
| Styrene | Flare #3 | 102 | 99.8 | 101 | 1.1 |
| 1,1,2,2-tetrachloroethane | Flare #3 | <30 | <30 | --- | --- |
| o-xylene | Flare #3 | 822 | 812 | 817 | 0.61 |
| 4-ethyl-toluene | Flare #3 | 210 | 205 | 208 | 1.2 |
| 1,3,5-trimethylbenzene | Flare #3 | 93.3 | 91.5 | 92.4 | 0.97 |
| 1,2,4-trimethylbenzene | Flare #3 | 166 | 161 | 164 | 1.5 |
| m-dichlorobenzene | Flare #3 | <20 | <20 | --- | --- |
| p-dichlorobenzene | Flare #3 | <30 | <30 | --- | --- |
| Benzylchloride | Flare #3 | <40 | <40 | --- | --- |
| o-dichlorobenzene | Flare #3 | <20 | <20 | --- | --- |
| 1,2,4-trichlorobenzene | Flare #3 | <60 | <60 | --- | --- |
| Hexachlorobutadiene | Flare #3 | <50 | <50 | --- | --- |
| Acrylonitrile | Flare #3 | <150 | <150 | --- | --- |

Three Tedlar bag samples, laboratory numbers 00485-(39-42), were analyzed for TO-14 components and acrylonitrile. Agreement between repeat analyses is a measure of precision and is shown above in the column "% Difference from Mean". Repeat analyses are an important part of AtmAA's quality assurance program. The average % Difference from Mean for 24 repeat measurements from the three Tedlar bag samples is 1.0%.





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LABORATORY ANALYSIS REPORT

Hydrogen Sulfide and Reduced Sulfur Compounds
Analysis in Tedlar Bag Samples

Report Date: March 3, 2005

Client: Shaw Environmental

Project Location: Bradley Landfill

Client Project No.: 108341.01

Date Received: February 17, 2005

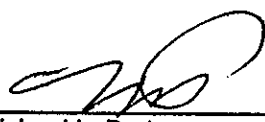
Date Analyzed: February 17 & 18, 2005

ANALYSIS DESCRIPTION

Hydrogen sulfide was analyzed by gas chromatography with a Hall electrolytic conductivity detector operated in the oxidative sulfur mode. All other components were measured by GC/ Mass Spec.

| | | | |
|---------------------|--------------------------------|----------|----------|
| AtmAA Lab No.: | 00485-39 | 00485-40 | 00485-41 |
| Sample I.D.: | Flare #3 | Flare #1 | Flare #2 |
| | BL-001 | BL-002 | BL-003 |
| <u>Components</u> | <u>(Concentration in ppmv)</u> | | |
| Hydrogen sulfide | 12.2 | 44.7 | 38.4 |
| Carbonyl sulfide | 0.24 | 0.37 | <0.08 |
| Methyl mercaptan | 2.25 | 3.59 | 0.45 |
| Ethyl mercaptan | <0.1 | 0.18 | 0.22 |
| Dimethyl sulfide | 7.66 | 7.27 | 0.46 |
| Carbon disulfide | 0.065 | 0.10 | 0.092 |
| isopropyl mercaptan | 0.064 | 0.30 | <0.06 |
| n-propyl mercaptan | <0.06 | <0.06 | <0.06 |
| Dimethyl disulfide | 0.38 | 0.36 | 0.12 |
| TRS | 23.3 | 57.3 | 40.0 |

TRS - total reduced sulfur



Michael L. Porter
Laboratory Director

QUALITY ASSURANCE SUMMARY
(Repeat Analyses)

Project Location: Bradley Landfill
Date Received: February 17, 2005
Date Analyzed: February 17 & 18, 2005

| Components | Sample ID | Repeat Analysis | | Mean | % Diff. |
|----------------------|-----------|-------------------------|--------|-------|-----------|
| | | Run #1 | Run #2 | Conc. | From Mean |
| | | (Concentration in ppmv) | | | |
| Hydrogen sulfide | Flare #3 | 12.4 | 12.1 | 12.2 | 1.2 |
| | Flare #1 | 44.4 | 45.0 | 44.7 | 0.67 |
| | Flare #2 | 38.4 | 38.5 | 38.4 | 0.13 |
| Carbonyl sulfide | Flare #3 | 0.23 | 0.24 | 0.24 | 2.1 |
| Methyl mercaptan | Flare #3 | 2.14 | 2.36 | 2.25 | 4.9 |
| Ethyl mercaptan | Flare #3 | <0.1 | <0.1 | --- | --- |
| Dimethyl sulfide | Flare #3 | 7.73 | 7.59 | 7.66 | 0.91 |
| Carbon disulfide | Flare #3 | 0.064 | 0.066 | 0.065 | 1.5 |
| iso-propyl mercaptan | Flare #3 | <0.06 | 0.064 | --- | --- |
| n-propyl mercaptan | Flare #3 | <0.06 | <0.06 | --- | --- |
| Dimethyl disulfide | Flare #3 | 0.40 | 0.37 | 0.38 | 3.9 |

Three Tedlar bag samples, laboratory numbers 00485-(39-41), were analyzed for hydrogen sulfide and reduced sulfur compounds. Agreement between repeat analyses is a measure of precision and is shown above in the column "% Difference from Mean". Repeat analyses are an important part of AtmAA's quality assurance program. The average % Difference from Mean for 8 repeat measurements from the three Tedlar bag samples is 1.9%.





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LABORATORY ANALYSIS REPORT

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SCAQMD Rule 1150.1 Components Analysis in Landfill Gas Tedlar Bag Samples

Report Date: March 3, 2005
Client: Shaw Environmental
Project Location: Bradley Landfill
Date Received: February 17, 2005
Date Analyzed: February 17 & 18, 2005

| AtmAA Lab No.: | 00485-39 | 00485-40 | 00485-41 |
|-----------------------|-------------------------|----------|----------|
| Sample I.D.: | Flare #3 | Flare #1 | Flare #2 |
| | BL-001 | BL-002 | BL-003 |
| Components | (Concentration in %,v) | | |
| Nitrogen | 39.4 | 12.4 | 37.8 |
| Oxygen | 5.29 | 1.20 | 2.38 |
| Methane | 27.7 | 46.0 | 29.9 |
| Carbon dioxide | 25.4 | 37.8 | 27.6 |
| | (Concentration in ppmv) | | |
| TGNMO | 3140 | 5720 | 1900 |
| Hydrogen sulfide | 12.2 | 44.7 | 38.4 |
| | (Concentration in ppbv) | | |
| Benzene | 8770 | 4120 | 1270 |
| Benzylchloride | <40 | <40 | <40 |
| Chlorobenzene | 80.4 | 162 | 216 |
| Dichlorobenzenes* | <30 | 551 | 457 |
| 1,1-dichloroethane | 136 | 282 | 69.9 |
| 1,2-dichloroethane | 35.8 | 82.2 | 23.1 |
| 1,1-dichloroethylene | 41.8 | 79.1 | <40 |
| Dichloromethane | 187 | 845 | <30 |
| 1,2-dibromoethane | <30 | <30 | <30 |
| Perchloroethylene | 476 | 1670 | 386 |
| Carbon tetrachloride | <30 | <30 | <30 |
| Toluene | 12000 | 32800 | 4970 |
| 1,1,1-trichloroethane | <20 | <20 | <20 |
| Trichloroethene | 250 | 737 | 142 |
| Chloroform | <20 | <20 | <20 |
| Vinyl chloride | 371 | 171 | 626 |
| m+p-xylenes | 2600 | 10900 | 5310 |
| o-xylene | 817 | 3650 | 2170 |
| | (Unit / ft.3) | | |
| BTU | 282 | 469 | 304 |


The reported oxygen concentration includes any argon present in the sample. Calibration is based on a standard atmosphere containing 20.95% oxygen and 0.93% argon.

The accuracy of the TCD/GC Method for permanent gases is +/- 2%, actual results are reported.

TGNMO is total gaseous non-methane organics measured and reported as ppm methane.

* total amount containing meta, para, and ortho isomers

BTU is calculated from the analysis of methane and TGNMO.


Michael L. Porter
Laboratory Director



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LABORATORY ANALYSIS REPORT

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Hydrogen Sulfide and Reduced Sulfur Compounds Analysis
in Landfill Gas Tedlar Bag Samples

Report Date March 3, 2005

Client: Shaw Environmental

Project Location: Bradley Landfill

Date Received: February 17, 2005

Date Analyzed: February 17 & 18, 2005

ANALYSIS DESCRIPTION

Hydrogen sulfide was analyzed by gas chromatography with a Hall electrolytic conductivity detector operated in the oxidative sulfur mode. All other sulfur components were measured by GC/ Mass Spec.

| | | | |
|---------------------|-------------------------|----------|----------|
| AtmAA Lab No.: | 00485-39 | 00485-40 | 00485-41 |
| Sample I.D.: | Flare #3 | Flare #1 | Flare #2 |
| | BL-001 | BL-002 | BL-003 |
| Components | (Concentration in ppmv) | | |
| Hydrogen sulfide | 12.2 | 44.7 | 38.4 |
| Carbonyl sulfide | 0.24 | 0.37 | <0.08 |
| Methyl mercaptan | 2.25 | 3.59 | 0.45 |
| Ethyl mercaptan | <0.1 | 0.18 | 0.22 |
| Dimethyl sulfide | 7.66 | 7.27 | 0.46 |
| Carbon disulfide | 0.065 | 0.10 | 0.092 |
| isopropyl mercaptan | 0.064 | 0.30 | <0.06 |
| n-propyl mercaptan | <0.06 | <0.06 | <0.06 |
| Dimethyl disulfide | 0.38 | 0.36 | 0.12 |
| TRS | 23.3 | 57.3 | 40.0 |

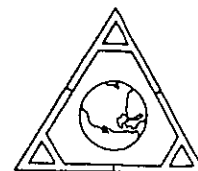
TRS - total reduced sulfur

Michael L. Porter
Laboratory Director

QUALITY ASSURANCE SUMMARY
(Repeat Analyses)

Project Location: Bradley Landfill
Date Received: February 17, 2005
Date Analyzed: February 17 & 18, 2005

| Components | Sample ID | Repeat Analysis | | Mean Conc. | % Diff. From Mean |
|-------------------------|-----------|------------------------|--------|------------|-------------------|
| | | Run #1 | Run #2 | | |
| | | (Concentration in %,v) | | | |
| Nitrogen | Flare #1 | 12.4 | 12.3 | 12.4 | 0.40 |
| Oxygen | Flare #1 | 1.19 | 1.21 | 1.20 | 0.83 |
| Methane | Flare #1 | 46.1 | 46.0 | 46.0 | 0.11 |
| Carbon dioxide | Flare #1 | 37.8 | 37.7 | 37.8 | 0.13 |
| (Concentration in ppmv) | | | | | |
| TGNMO | Flare #3 | 3000 | 3280 | 3140 | 4.4 |
| (Concentration in ppbv) | | | | | |
| Benzene | Flare #3 | 8670 | 8870 | 8770 | 1.1 |
| Benzylchloride | Flare #3 | <40 | <40 | --- | --- |
| Chlorobenzene | Flare #3 | 81.1 | 79.8 | 80.4 | 0.81 |
| Dichlorobenzenes | Flare #3 | <30 | <30 | --- | --- |
| 1,1-dichloroethane | Flare #3 | 140 | 133 | 136 | 2.6 |
| 1,2-dichloroethane | Flare #3 | 35.9 | 35.6 | 35.8 | 0.42 |
| 1,1-dichloroethylene | Flare #3 | 42.6 | 41.0 | 41.8 | 1.9 |
| Dichloromethane | Flare #3 | 188 | 186 | 187 | 0.53 |
| 1,2-dibromoethane | Flare #3 | <30 | <30 | --- | --- |
| Perchloroethylene | Flare #3 | 477 | 475 | 476 | 0.21 |
| Carbon tetrachloride | Flare #3 | <30 | <30 | --- | --- |
| Toluene | Flare #3 | 12000 | 11900 | 12000 | 0.42 |
| 1,1,1-trichloroethane | Flare #3 | <20 | <20 | --- | --- |
| Trichloroethene | Flare #3 | 249 | 251 | 250 | 0.40 |

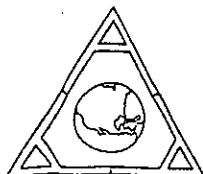


QUALITY ASSURANCE SUMMARY
(Repeat Analyses)
(continued)

| Components | Sample ID | Repeat Analysis | | Mean Conc. | % Diff. From Mean |
|-------------------------|-----------|-----------------|--------|------------|-------------------|
| | | Run #1 | Run #2 | | |
| (Concentration in ppbv) | | | | | |
| Chloroform | Flare #3 | <20 | <20 | --- | --- |
| Vinyl chloride | Flare #3 | 373 | 369 | 371 | 0.54 |
| m+p-xylenes | Flare #3 | 2620 | 2590 | 2600 | 0.58 |
| o-xylene | Flare #3 | 822 | 812 | 817 | 0.61 |
| (Concentration in ppmv) | | | | | |
| Sulfur Components | | | | | |
| Hydrogen sulfide | Flare #3 | 12.4 | 12.1 | 12.2 | 1.2 |
| | Flare #1 | 44.4 | 45.0 | 44.7 | 0.67 |
| | Flare #2 | 38.4 | 38.5 | 38.4 | 0.13 |
| Carbonyl sulfide | Flare #3 | 0.23 | 0.24 | 0.24 | 2.1 |
| Methyl mercaptan | Flare #3 | 2.14 | 2.36 | 2.25 | 4.9 |
| Ethyl mercaptan | Flare #3 | <0.1 | <0.1 | --- | --- |
| Dimethyl sulfide | Flare #3 | 7.73 | 7.59 | 7.66 | 0.91 |
| Carbon disulfide | Flare #3 | 0.064 | 0.066 | 0.065 | 1.5 |
| iso-propyl mercaptan | Flare #3 | <0.06 | 0.064 | --- | --- |
| n-propyl mercaptan | Flare #3 | <0.06 | <0.06 | --- | --- |
| Dimethyl disulfide | Flare #3 | 0.40 | 0.37 | 0.38 | 3.9 |

Three Tedlar bag samples, laboratory numbers 00485-(39-41), were analyzed for SCAQMD 1150.1 components, permanent gases, TGNMO, hydrogen sulfide, and reduced sulfur compounds. Agreement between repeat analyses is a measure of precision and is shown above in the column "% Difference from Mean". Repeat analyses are an important part of AtmAA's quality assurance program. The average % Difference from Mean for 25 repeat measurements from the three Tedlar bag samples is 1.2%.





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LABORATORY ANALYSIS REPORT

Hydrogen Sulfide, Reduced Sulfur Compounds, and BTU
Analysis in Landfill Gas Tedlar Bag Samples


Report Date: April 1, 2005
Client: Shaw Environmental
Project Location: Bradley Landfill
Client Project No.: 108341.01
Date Received: March 18, 2005
Date Analyzed: March 18, 2005

ANALYSIS DESCRIPTION

Hydrogen sulfide was analyzed by gas chromatography with a Hall electrolytic conductivity detector operated in the oxidative sulfur mode. All other sulfur components were measured by GC/Mass Spec. BTU is calculated from methane, which was measured by thermal conductivity detection/gas chromatography (TCD/GC), and total gaseous non-methane organics (TGNMO), which was measured by flame ionization detection/total combustion analysis (FID/TCA).

| | | | |
|----------------------|-------------------------|----------|----------|
| AtmAA Lab No.: | 00775-1 | 00775-2 | 00775-3 |
| Sample I.D.: | Flare #3 | Flare #1 | Flare #2 |
| | BL-001 | BL-002 | BL-003 |
| Components | (Concentration in ppmv) | | |
| Hydrogen sulfide | 18.0 | 38.6 | 34.8 |
| Carbonyl sulfide | 0.18 | 0.29 | 0.082 |
| Methyl mercaptan | 3.31 | 4.60 | 0.88 |
| Ethyl mercaptan | <0.1 | <0.1 | 0.24 |
| Dimethyl sulfide | 9.98 | 7.83 | 1.16 |
| Carbon disulfide | 0.086 | 0.10 | 0.37 |
| iso-propyl mercaptan | 0.12 | 0.30 | <0.06 |
| n-propyl mercaptan | <0.06 | <0.06 | <0.06 |
| Dimethyl disulfide | 0.48 | 0.30 | 0.53 |
| TRS | 42.6 | 60.2 | 39.8 |
| BTU / ft.3 | 338 | 435 | 314 |

TRS - total reduced sulfur

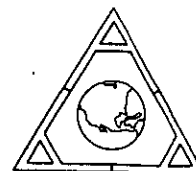

Michael L. Porter
Laboratory Director

QUALITY ASSURANCE SUMMARY
(Repeat Analyses)

Project Location: Bradley Landfill
Date Received: March 18, 2005
Date Analyzed: March 18, 2005

| Components | Sample ID | Repeat Analysis | | Mean Conc. | % Diff. From Mean |
|----------------------|-----------|-------------------------|--------|------------|-------------------|
| | | Run #1 | Run #2 | | |
| | | (Concentration in ppmv) | | | |
| Hydrogen sulfide | Flare #3 | 18.2 | 17.9 | 18.0 | 0.83 |
| | Flare #1 | 39.6 | 37.5 | 38.6 | 2.7 |
| | Flare #2 | 34.8 | 34.9 | 34.8 | 0.14 |
| Carbonyl sulfide | Flare #3 | 0.18 | 0.19 | 0.18 | 2.7 |
| Methyl mercaptan | Flare #3 | 3.36 | 3.26 | 3.31 | 1.5 |
| Ethyl mercaptan | Flare #3 | <0.1 | <0.1 | --- | --- |
| Dimethyl sulfide | Flare #3 | 9.99 | 9.98 | 9.98 | 0.050 |
| Carbon disulfide | Flare #3 | 0.086 | 0.087 | 0.086 | 0.58 |
| iso-propyl mercaptan | Flare #3 | 0.12 | 0.12 | 0.12 | 0.0 |
| n-propyl mercaptan | Flare #3 | <0.06 | <0.06 | --- | --- |
| Dimethyl disulfide | Flare #3 | 0.48 | 0.47 | 0.48 | 1.0 |

A set of three Tedlar bag samples, laboratory numbers 00775-(1-3), was analyzed for hydrogen sulfide, reduced sulfur compounds, and BTU. Agreement between repeat analysis is a measure of precision and is shown above in the column "% Difference from Mean". Repeat analyses are an important part of AtmAA's quality assurance program. The average % Difference from Mean for 9 repeat measurements from the sample set of three Tedlar bag samples is 1.0%.



APPENDIX F

AMBIENT AIR SAMPLING

- Laboratory Analysis
- Chain of Custody
- Wind Speed and Direction Records


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LABORATORY ANALYSIS REPORT

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SCAQMD Rule 1150.1 Components Analysis in Ambient Air Tedlar Bag Samples

Report Date: March 14, 2005

Client: Waste Management

Project Location: Bradley Landfill

Date Received: February 28, 2005

Date Analyzed: February 28 & March 1, 2005

| AtmAA Lab No.: Sample I.D.: | 00595-11 Ambient Air AA-1 | 00595-12 Ambient Air AA-2 | 00595-13 Ambient Air AA-3 | 00595-14 Ambient Air AA-4 |
|--------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| Components | (Concentration in ppmv) | | | |
| Methane | 3.32 | 2.18 | 19.8 | 3.06 |
| TGNMO | 1.57 | 1.68 | 1.75 | 1.66 |
| | (Concentration in ppbv) | | | |
| Hydrogen sulfide | <50 | <50 | <50 | <50 |
| Benzene | 0.47 | 0.50 | 0.38 | 0.38 |
| Benzylchloride | <0.4 | <0.4 | <0.4 | <0.4 |
| Chlorobenzene | <0.1 | <0.1 | <0.1 | <0.1 |
| Dichlorobenzenes* | <1.1 | <1.1 | <1.1 | <1.1 |
| 1,1-dichloroethane | <0.1 | <0.1 | <0.1 | <0.1 |
| 1,2-dichloroethane | <0.1 | <0.1 | <0.1 | <0.1 |
| 1,1-dichloroethylene | <0.1 | <0.1 | <0.1 | <0.1 |
| Dichloromethane | 0.34 | 0.40 | 0.40 | 0.35 |
| 1,2-dibromoethane | <0.1 | <0.1 | <0.1 | <0.1 |
| Perchloroethylene | <0.1 | <0.1 | 1.30 | <0.1 |
| Carbon tetrachloride | 0.12 | 0.12 | 0.11 | 0.12 |
| Toluene | 1.94 | 1.43 | 1.17 | 1.38 |
| 1,1,1-trichloroethane | 0.43 | <0.1 | <0.1 | <0.1 |
| Trichloroethene | <0.1 | <0.1 | <0.1 | <0.1 |
| Chloroform | <0.1 | <0.1 | <0.1 | <0.1 |
| Vinyl chloride | <0.1 | <0.1 | <0.1 | <0.1 |
| m+p-xylenes | 1.92 | 1.01 | 0.83 | 0.83 |
| o-xylene | 1.13 | 0.55 | 0.37 | 0.37 |

TGNMO is total gaseous non-methane organics measured and reported as ppm methane.

* total amount containing meta, para, and ortho isomers

Michael L. Porter
Laboratory Director

QUALITY ASSURANCE SUMMARY (Repeat Analyses)

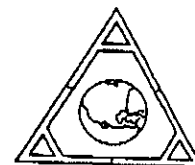
Project Location: Bradley Landfill

Date Received: February 28, 2005

Date Analyzed: February 28 & March 1, 2005

| Components | Sample ID | Repeat Analysis | | Mean Conc. | % Diff. From Mean |
|-----------------------|-----------|-------------------------|--------|------------|-------------------|
| | | Run #1 | Run #2 | | |
| Methane | AA-1 | (Concentration in ppmv) | | | |
| | | 3.31 | 3.34 | 3.32 | 0.45 |
| TGNMO | AA-1 | 1.75 | 1.39 | 1.57 | 11 |
| Hydrogen sulfide | AA-1 | (Concentration in ppbv) | | | |
| | | <50 | <50 | --- | --- |
| Benzene | AA-1 | 0.50 | 0.44 | 0.47 | 6.4 |
| Benzylchloride | AA-1 | <0.4 | <0.4 | --- | --- |
| Chlorobenzene | AA-1 | <0.1 | <0.1 | --- | --- |
| Dichlorobenzenes | AA-1 | <1.1 | <1.1 | --- | --- |
| 1,1-dichloroethane | AA-1 | <0.1 | <0.1 | --- | --- |
| 1,2-dichloroethane | AA-1 | <0.1 | <0.1 | --- | --- |
| 1,1-dichloroethylene | AA-1 | <0.1 | <0.1 | --- | --- |
| Dichloromethane | AA-1 | 0.40 | 0.29 | 0.34 | 16 |
| 1,2-dibromoethane | AA-1 | <0.1 | <0.1 | --- | --- |
| Perchloroethylene | AA-1 | <0.1 | <0.1 | --- | --- |
| Carbon tetrachloride | AA-1 | 0.12 | 0.12 | 0.12 | 0.0 |
| Toluene | AA-1 | 1.96 | 1.91 | 1.94 | 1.3 |
| 1,1,1-trichloroethane | AA-1 | 0.43 | 0.43 | 0.43 | 0.0 |
| Trichloroethene | AA-1 | <0.1 | <0.1 | --- | --- |
| Chloroform | AA-1 | <0.1 | <0.1 | --- | --- |
| Vinyl chloride | AA-1 | <0.1 | <0.1 | --- | --- |
| m+p-xylenes | AA-1 | 1.80 | 2.03 | 1.92 | 6.0 |
| o-xylene | AA-1 | 1.11 | 1.15 | 1.13 | 1.8 |

Four Tedlar bag samples, laboratory numbers 00595-(11-14), were analyzed for SCAQMD Rule 1150.1 components, methane, and total gaseous non-methane organics (TGNMO). Agreement between repeat analyses is a measure of precision and is shown above in the column "% Difference from Mean". Repeat analyses are an important part of AtmAA's quality assurance program. The average % Difference from Mean for 9 repeat measurements from four Tedlar bag samples is 4.8%.



CHAIN OF CUSTODY RECORD

Client/Project Name

BRADLEY LANDFILL

Project Location

Summit

Project No.

Field Logbook No.

ANALYSES

Sampler: (Print)

Chris Sumner

(Signature)

Chris

No. Of Containers

4

Sample No./
Identification

Date

Time

Lab Sample
Number

Type of
Sample

TOC

TAC

Remarks

AA-1

2-26/27-05

0900-240

Ambient Air

X

X

1150.1

AA-2

2-26/27-05

0900-2100

IL

X

X

AA-3

2-26/27-05

2100-0900

IL

X

X

AA-4

2-26/27-05

2100-0900

IL

X

X

Relinquished by: (Signature)

Chris

Date

2-28-05

Time

10:00

Received by: (Signature)

Date

Time

Relinquished by: (Signature)

Date

Time

Received by: (Signature)

Date

Time

Relinquished by: (Signature)

Date

Time

Received for Laboratory: (Signature)

Date

Time

Sample Disposal Method:

Disposed of by: (Signature)

Date

Time

Sample Collector

Analytical Laboratory

RES



Environmental Inc.

865 Via Lata • Colton, California 92324
(909) 422-1001 Fax (909) 422-0707

ATMAA

Data: Wind Direction (16 points)
Station: BRADLEY
Period: FEB, 2005

[illegible]

Data: Wind Speed (MPH)
Station: BRADLEY
Period: FEB, ' 2005

[illegible]

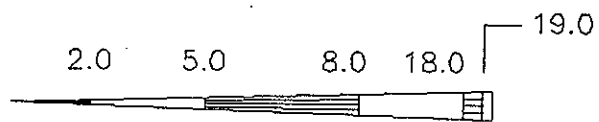
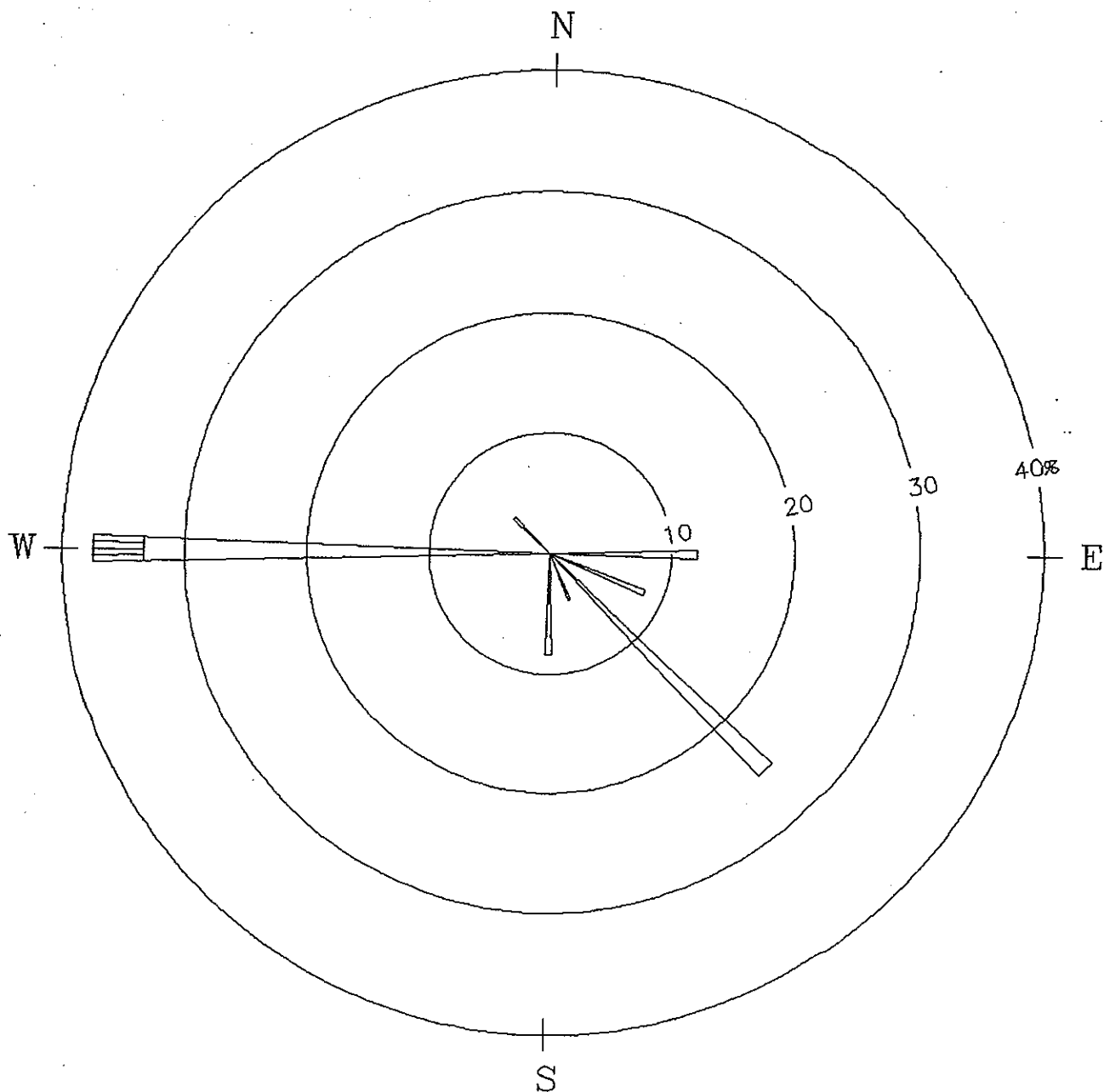
BRADLEY LANDFILL

Data: Wind Rose
 Station: BRADLEY
 Period: FEB 26,
 Hours: 10 - 09

FEB 27,

Wind Speed and Direction
 Frequency Distribution

| Direction | Wind Speed (MPH) Group | | | | | TOT | %TOT | AVE SPEED |
|-----------|------------------------|------|-----|------|-----|------|--------|-----------|
| | 0-2 | 3-5 | 6-8 | 9-18 | 19+ | | | |
| 16 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 |
| 1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 |
| 2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 |
| 3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 |
| 4 | 0.0 | 12.0 | 0.0 | 0.0 | 0.0 | 3.0 | 12.50 | 3.67 |
| 5 | 0.0 | 8.3 | 0.0 | 0.0 | 0.0 | 2.0 | 8.33 | 3.00 |
| 6 | 0.0 | 25.0 | 0.0 | 0.0 | 0.0 | 6.0 | 25.00 | 3.83 |
| 7 | 0.0 | 4.1 | 0.0 | 0.0 | 0.0 | 1.0 | 4.17 | 5.00 |
| 8 | 0.0 | 8.3 | 0.0 | 0.0 | 0.0 | 2.0 | 8.33 | 4.00 |
| 9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 |
| 10 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 |
| 11 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 |
| 12 | 0.0 | 33.0 | 4.1 | 0.0 | 0.0 | 9.0 | 37.50 | 4.44 |
| 13 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 |
| 14 | 0.0 | 4.1 | 0.0 | 0.0 | 0.0 | 1.0 | 4.17 | 3.00 |
| 15 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 |
| MSG | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 |
| TOT | 0.0 | 95.0 | 4.1 | 0.0 | 0.0 | 24.0 | 100.00 | 1.68 |



WIND SPEED CLASS BOUNDARIES
(MILES/HOUR)

NOTES:
 DIAGRAM OF THE FREQUENCY OF
 OCCURRENCE FOR EACH WIND DIRECTION.
 WIND DIRECTION IS THE DIRECTION
 FROM WHICH THE WIND IS BLOWING.
 EXAMPLE - WIND IS BLOWING FROM THE
 NORTH .0 PERCENT OF THE TIME.

WINDROSE

BRADLEY

PERIOD: 2/26-27/05

APPENDIX G

TEDLAR BAG QUALITY ASSURANCE AND CONTROL

- Tedlar Bag Checklist

BAG SAMPLER QUALITY CONTROL

PROJECT/SITE: BRADLEY LANDFILL BAG # _____
DATE PREPARED: 2-25-05 PREPARED BY: CMS
SAMPLER # 4 RUN DATE: 2-26-05

BAG INSTALLATION

BAG INSTALLED BY: CMS DATE: 2-26-05
FLOW READING: 85^{cc} ADJUSTED ? () NO () OPEN VALVE ☒
TIME STARTED:
LOCAL 2100
LOCATION: AA-4

BAG REMOVAL

BAG REMOVED BY: CMS DATE: 2-27-05
CLOSE VALVE ☒ FLOW AT END: 85^{cc}
BAG STATUS: FULL ☒ 1/2 FULL () EMPTY ()
TIME ENDED:
LOCAL 0900
SAMPLER STATUS: WORKING ☒ NOT WORKING ()
(specify in comments)
BATTERY STATUS GOOD ☒ BAD ()
COMMENTS: _____

REVIEWED BY: CMS

BAG SAMPLER QUALITY CONTROL

PROJECT/SITE: BREWLEY LANDFILL BAG# _____
DATE PREPARED: 2-25-05 PREPARED BY: CMS
SAMPLER # 4 RUN DATE: 2-26-05

BAG INSTALLATION

BAG INSTALLED BY: CMS DATE: 2-26-05
FLOW READING: 85 cc ADJUSTED ? () NO () OPEN VALVE ☒
TIME STARTED:
LOCAL 0900
LOCATION: AA-2

BAG REMOVAL

BAG REMOVED BY: CMS DATE: 2-26-05
CLOSE VALVE ☒ FLOW AT END: 85 cc
BAG STATUS: FULL ☒ 1/2 FULL () EMPTY ()
TIME ENDED:
LOCAL 2100
SAMPLER STATUS: WORKING ☒ NOT WORKING ()
(specify in comments)
BATTERY STATUS GOOD ☒ BAD ()
COMMENTS: _____

REVIEWED BY: CMS

BAG SAMPLER QUALITY CONTROL

PROJECT/SITE: BROWLEY LANDFILL BAG # _____
DATE PREPARED: 2-25-05 PREPARED BY: CMS
SAMPLER # 3 RUN DATE: 2-26-05

BAG INSTALLATION

BAG INSTALLED BY: CMS DATE: 2-26-05
FLOW READING: 85 cc ADJUSTED ? () NO () OPEN VALVE ☒
TIME STARTED:
LOCAL 2100
LOCATION: AA-3

BAG REMOVAL

BAG REMOVED BY: CMS DATE: 2-27-05
CLOSE VALVE ☒ FLOW AT END: 85 cc
BAG STATUS: FULL ☒ 1/2 FULL () EMPTY ()
TIME ENDED:
LOCAL 0900
SAMPLER STATUS: WORKING ☒ NOT WORKING ()
(specify in comments)
BATTERY STATUS GOOD ☒ BAD ()
COMMENTS: _____

REVIEWED BY: CMS

BAG SAMPLER QUALITY CONTROL

PROJECT/SITE: BRADLEY CANNON BAG # _____
DATE PREPARED: 2-25-05 PREPARED BY: CMS
SAMPLER # 3 RUN DATE: 2-26-05

BAG INSTALLATION

BAG INSTALLED BY: CMS DATE: 2-26-05
FLOW READING: 85 cc ADJUSTED ? () NO () OPEN VALVE ☒
TIME STARTED:
LOCAL 0900
LOCATION: AA-1

BAG REMOVAL

BAG REMOVED BY: CMS DATE: 2-26-05
CLOSE VALVE ☒ FLOW AT END: 85 cc
BAG STATUS: FULL ☒ 1/2 FULL () EMPTY ()
TIME ENDED:
LOCAL 2100
SAMPLER STATUS: WORKING ☒ NOT WORKING ()
(specify in comments)
BATTERY STATUS GOOD ☒ BAD ()
COMMENTS: _____

REVIEWED BY: CMS